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ABSTRACT

Five working papers in linguistics are presented. "Case Marking Strategies in Kope" (John Clifton) shows that there are different strategies followed by Kope for marking core as opposed to peripheral arguments, and discusses typological implications. In "Unmarked and Marked Instances of Topicalization in Hebrew" (Stephen H. Levinsohn), the normal or unmarked function of topicalization in narrative discourse is spelled out. "Zapotec Pronoun Classification" (Stephen A. Marlett) accounts for the distribution of pronouns based on the proper identification of the head of the phrase. "Laminal Sibilants in Chamicuro" (Steve Parker) examines the phonological status of this phoneme group and two possible explanations for the complex distribution patterns of Chamicuro sibilants. In "Possessor Ascension in Dakota Sioux" (Thomas M. Pinson), evidence is presented for Possessor Ascension, a construction in which a nominal that is semantically a possessor is syntactically not a constituent of the noun phrase but rather a constituent of the clause. (MSE)

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PREFACE

Of the five papers presented in this volume, four (those by Clifton, Levinsohn, Marlett and Parker) represent work by faculty in this summer's course, and one (by Pinson) presents partial results of work towards a thesis by a candidate for the M.A. degree in linguistics at UND.

We would like to thank several persons, who shall here remain anonymous, for their contribution in reviewing the papers and making valuable suggestions. Betty Brown has done her typically efficient job of shepherding the papers through the copy editing phase, and Jim Skelton has been equally efficient at the computer in preparing the volume for printing.

J.M.C.

R.A.D.

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CASE MARKING STRATEGIES IN KOPE*

John Clifton

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1 Introduction

In this paper I will examine case marking strategies in Kope,[1] a Papuan language of Papua New Guinea, in light of claims made by Foley (1986:92-98). Foley makes a basic distinction between 'core' and 'peripheral' case relations in his typological study of case marking in the Papuan languages of New Guinea. Core relations include actor and undergoer, while peripheral relations include instrument, locative, and temporal. Syntactically, Foley claims that most Papuan languages have one strategy for marking core relations, and another strategy for marking peripheral relations.

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* I am grateful to Ger Reesink for starting me on this study, and to John Haiman for encouraging me to get it on paper. I am also grateful to Bob Dooley, Stephen Levinsohn, Steve Marlett, Steve Parker, and Stephen Walker for their helpful comments on earlier drafts of this paper. All remaining shortcomings are, of course, my own.

[1] Kope (or Gope) is one of five dialects making up the language referred to as North-East Kiwai by Wurm (1973). There are about 4000 speakers of the language, of which about 1300 speak Kope. It is a member of the Kiwai language family, spoken in the Gulf Province of Papua New Guinea. The data in this paper was collected by the author and Deborah Clifton under the auspices of the Papua New Guinea branch of the Summer Institute of Linguistics between June 1982 and May 1987.

A third group of relations discussed by Foley includes the beneficiary and recipient relations. Foley (1986:98) refers to these as 'middle-ground' relations on the basis that in some languages they are marked according to the strategy for core relations, while in others they are marked according to the strategy for peripheral relations. Foley does not discuss any languages in which these relations are marked according to a separate strategy.

In sect. 2 of this paper I show that, in line with Foley's claim, Kope follows different strategies for marking core as opposed to peripheral arguments. Then in sect. 3 I show that the beneficiary, recipient, and addressee relations are also marked as core arguments in Kope. In addition to normal agreement marking, however, the presence of these relations also triggers the presence of the verbal prefix *Vm-*. In sect. 4 I outline the wider use of this prefix. Finally, I discuss some typological implications of this marking system in sect. 5.

2 Marking of core and peripheral relations

In this brief grammatical overview I will discuss how core and peripheral case relations are marked in Kope. In sect. 2.1 I outline nominal case markings, while in sect. 2.2 I outline verbal agreement markers.

2.1 Nominal case marking

Kope is generally a verb-final language. In context, one or both core relations of actor and undergoer are frequently realized as zero anaphora, that is, there is no overt nominal or pronominal element present. Examples of intransitive and transitive sentences with overt core relations are given in (1-4).[2]

(1) Turiaha ubi odau-maka-umo.
all people go-NEAR-PL
All the people went.

---

[2] All examples in this paper are written in current Kope orthography. The consonantal inventory includes *p t k b d g m n '* (glottal stop). The vocalic inventory includes *i e a o u*.
Grammatical abbreviations used in glosses include: PR(esent), NEAR(Past), MID(Past), FAR(Past), FUT(ure), DEC(larative), 1(st)PER(son), P(lural)A(bsolutive), D(ua)L, PL(ural), NEG(ative), 1(st)s(ingular), 1(st)p(lural), 2(nd)s(ingular) 3(rd)s(ingular), ERG(ative), SOU(rce), LOC(ative), GOAL, INS(trument), ACCOM(paniment), VOC(ative).
In addition, the suffix *-i* occurs on the final word in all noun phrases, and on many verbs. I have not separated this morpheme in the examples since it is not relevant to the phenomena discussed in this paper.

(2) Nu pei o'o-maka.
3s canoe make-NEAR
He made a canoe.

(3) Nu-ro Tiramu ea'a-maka.
3s-ERG Tiramu see-MID
He saw Tiramu.

(4) A'o odi mo-ro pi-r-oroadu'o.
this story 1s-ERG FAR-1PER-tell
I told this story.

As can be seen, the suffix *-ro* optionally marks the ergative case. The undergoer is never case marked, while the actor is generally unmarked in an intransitive sentence.[3] Although the actor generally precedes the undergoer, this order can be reversed due to discourse considerations as shown in (4).

Peripheral relations are consistently realized as postpositional phrases. Foley considers such postpositions nominal case marking. Examples of the principal postpositions are given in (5-9).

(5) Ka mo-ro pei nioi da aiha pi-r-irudemea.
and 1s-ERG canoe inside LOC ? FAR-1PER-pray
I prayed inside the canoe.

(6) Nimo abeami'oi Bavi ato p-o'u-mo.
1p grandfather Bavi SOU FAR-come-PL
Our grandfathers came from Bavi.

(7) Mo go'otoi eito pi-r-o'u.
1s village GOAL FAR-1PER-come
I came to the village.

(8) Mo-ro beuma ito itai r-a'ai.
1s-ERG bamboo INS cook 1PER-FUT
I will cook using the bamboo.

(9) Merekehi p-orobu goroi da mo rautu.
child FAR-sleep inside LOC 1s ACCOM
The child was sleeping inside with me.

Location is marked with *da* in (5), source with *ato* in (6), goal with *eito* in (7), instrument with *ito* in (8), and accompaniment with *rautu* in

---

[3] Subjects of intransitive verbs are never marked when the sentence is produced in isolation. They do sometimes take the suffix *-ro* in discourse, although the conditions under which this occurs are not clear. Similar observations are made by Anderson and Wade (1989) for Folopa.

(9). Although peripheral relations generally occur before the verb, they may occur after it as in (9).

In general, then, peripheral relations in Kope are obligatorily marked with nominal case marking. The situation for core relations is more complex. Undergoers are never marked with nominal case marking. Actors, on the other hand, are optionally marked with the suffix *-ro*, but generally only in transitive clauses. Although the picture is complex, however, it seems reasonable that the presence or absence of nominal case marking can be taken as evidence as to whether or not a particular relation is peripheral or core.

2.2 Verbal agreement affixation

Two verbal agreement affixes are useful in differentiating between core and peripheral relations in Kope. The first is the prefix *r-* seen in (5,7,8) above. In each of these examples it indicates the presence of a first person actor. Notice the *r-* does not appear in (6) where the first person *nimo* 'our' is not the actor but an adjectival modifier of the actor *abeami'oi* 'grandfathers.' It also does not appear in (9) where the first person noun phrase *mo rautu* 'with me' bears a peripheral case relation. In (10), however, both verbs take *r-*.

(10) Ka mo ai-pi-r-omoto-ido, r-i'i.
and 1s ?-FAR-1PER-care.for-DL 1PER-grow
They took care of me, and I grew.

Mo 'I/me' is the undergoer in the first clause including the verb *omoto* 'to care for', but the actor in the second clause including the verb *i'i* 'to grow'. A verb, then, takes the agreement marker *r-* if and only if one of the core relations is first person. A peripheral relation which is first person will not trigger the agreement marker *r-*. As seen in (11), a verb is marked with *r-* even if the core relation which is first person is realized as zero anaphora.

(11) Nu mioi pi-r-oromidio-umo.[4]
3s calling FAR-1PER-hear-PL
We heard his calling.

The second agreement marker which is relevant to the core/peripheral distinction is *i-*. As seen in (12-15), *i-* is used when the absolutive is plural.

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[4] The suffix *-(u)mo* is used when there is a plural subject. This suffix, then, is not relevant to this paper since I am dealing with nonsubject core relations.

(12) Nimo naarai im-i-o'uo-duumo;[5] m-i-o'uo-dumo.
1p things ?-PA-go.down-PR ?-PA-go.down
Our things went down; they went down.

(13) Nu ga'aiha p-i-a'uubai.
3s bow.and.arrows FAR-PA-get
He got the bow and arrows.

(14) ...ka oomoi-da-'o r-i-obo-kame i-ho nai.
and river-LOC-? 1PER-PA-catch-NEAR PA-eat fish
...in the river we caught fish to eat.

(15) ...naarai im-i-dodiai.
things ?-PA-make
...he prepared his things.

This agreement marker is not obligatory on intransitive verbs which occur with plural actors. For example, it is present in (12) but not in (6) above. In the case of transitive verbs taking plural undergoers, however, the presence of *i-* is obligatory as in (13-15). As seen in (16), the *i-* prefix is present even if the plural absolutive is realized within the clause as zero anaphora.

(16) Ara ni'o boomoi; i-huti-mo.
this 2p pig PA-cut-PL
Here are your pigs; cut them.

As seen in (17), however, the prefix is not triggered by a plural ergative.

(17) Obo-ra dubu-rai dui p-ototoi-do.
woman-and man-and sago FAR-pound.sago-DL
A woman and man were making sago.

Similarly, (18) shows that the prefix is not triggered by a plural peripheral relation.

(18) Kaida pi-r-a'o ni-ido, "...
then FAR-1PER-say 3p-GOAL
And then I said to them, "...

Thus, the presence or absence of the first person agreement marker *r-* differentiates between core and peripheral relations. In addition,

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[5] The morpheme *im-* '?' is not a realization of the prefix *Vm-* which is the focus of this paper. First, as will be seen in sect. 4.1, the prefix *Vm-* should result in the meaning 'take down' when added to *o'uo* 'go down'. Second, as will be seen in sect. 3.1, the plural absolutive (PA) prefix precedes, not follows, the prefix *Vm-*.

the plural absolutive agreement marker *i-* differentiates between core absolutive relations and peripheral relations.

3 Marking of middle-ground relations

In this section I discuss the marking of the middle-ground relations, that is, beneficiary, recipient, and addressee. These relations are marked as core relations. In addition to the marking discussed in sect. 2, however, the presence of these relations triggers the presence of the verbal prefix *Vm-*. Before I discuss the syntactic properties of *Vm-* it is necessary to make two observations about the morphology of this prefix. Examples of verbs with and without *Vm-* are given in (19).

(19)	Unprefixed	Affixed	Gloss
a.	*ododiai*	*omododiai*	make
b.	*eidai*	*emeidai*	get
c.	*ate*	*emate*	fill
d.	*ido'o*	*omodo'o*	drop coconuts
e.	*ididi*	*emidi*	build
f.	*o'o*	*eme'e*	make canoe

The first observation relates to allomorphy in the verb roots. The majority of verb roots pattern similarly to (19a,b,c) in that they have identical allomorphs in prefixed and unprefixed forms. In other cases, however, verb roots have different allomorphs as illustrated in (19d,e,f). I have no explanation for this variation in root shape, so assume it is included in the lexical entry of each verb.

The second observation is that the prefix *Vm-* has two allomorphs, *om-* and *em-*, depending on whether the initial vowel in the verb root is round or nonround. The form *om-* occurs before the round vowels *u o* as in (19a,d), while the form *em-* occurs before the nonround vowels *i e a* as in (19b,c,e,f). In the case of roots with more than one allomorph, the vowel of the prefix is determined by the vowel in the allomorph of the root that takes the prefix. As the actual underlying representation of the prefix is not relevant to this paper, I will continue to refer to it as *Vm-*.

In sect. 3.1-3.3 I discuss the beneficiary, recipient, and addressee relations. I show that each relation is marked as a core relation. In addition, each requires the presence of the prefix *Vm-*. I show that syntactically the presence of *Vm-* indicates a core relation has been added to the clause. At the same time I suggest that the semantics of *Vm-* are dependent to a large degree on the semantics of the verb root to which it is attached.

3.1 Beneficiary

The beneficiary relation is the most productive of the three middle-ground relations; that is, the beneficiary relation does not seem to be limited to verbs sharing common semantic characteristics. Examples of clauses with beneficiary relations are given in (20-24).

(20) I-odau-mo go'otai im-om-odo'o-mo.
?-go-PL coconut ?-Vm-drop.coconuts-PL
They went and dropped coconuts for him.

(21) Kiau-ka mere-oi em-idi-mo.
finish-DEC long.house-? Vm-build-PL
Then they built a long house for him.

(22) Merei gitorai im-om-ododiai...
person sleeping.place ?-Vm-make
She prepared a sleeping place for the person...

(23) ...oboi goe aiha p-em-eidai...
wife betel.nut ? FAR-Vm-get
...he got betel nut for his wife...

(24) Obo aiha p-om-ohau i-emeheai ne'ei-da...
woman ? Far-Vm-come.out ?-leave.ST place-LOC
He came out for the wife, to the place he left her...

In (20-21) the beneficiary is realized as zero anaphora; in (22-24) it is explicit. Beneficiary relations normally precede the undergoers. Beneficiary relations are never marked by nominal case marking. The first argument, then, that the beneficiary relation is core, not peripheral, is that it does not take nominal case marking.

The second argument is that a plural beneficiary triggers the plural absolutive agreement marker *i-* in the verb as seen in (25).

(25) Ka nu go'ooto uubi boomoi aiha p-i-m-ai'ia.
and 3s village people pig ? FAR-PA-Vm-kill
He killed a pig for his village people.

The absence of the *e* in the prefix *Vm-* is due to a rule of vowel deletion. In general, root initial *e* and *u* are deleted after the *i-* prefix; root initial *o* is deleted in some roots after this prefix. Examples of verb forms used with singular and plural absolutives are given in (26).

(26)	Sing Absol	Pl Absol	Gloss
	ea'a	*ia'a*	see
	uho	*iho*	eat
	ododiai	*idodiai*	make

Thus, *i-* is from *i-Vm-*. In (25), the presence of *i-* must be due to the plural beneficiary *nu go'ooto uubi* 'his village people,' since the undergoer *boonoi* 'pig' is singular.

Each of the verbs in (20-24) is prefixed with *Vm-*. The verbs in (20-23) would normally be transitive in their unprefixed form, that is, they would take an actor and undergoer. The verb in (24) would normally be intransitive, that is, it would take an actor. None of these verbs, then, would take a beneficiary in their unprefixed forms. The function of the prefix *Vm-*, then, seems to be to indicate that the verb is taking an additional, beneficiary relation.

3.2 Recipient

The only verb in Kope which seems to take a recipient is *ema'ai* 'to give' as illustrated in (27-28).

(27) Ka pei o'o merei r-em-a'ai-kaumo.
and canoe make.canoe person 1PER-Vm-do-PR
I give it to the canoe maker.

(28) Ka Iona iha mea du'i p-em-a'ai.
and Jonah very good shade FAR-Vm-do
And it gave Jonah very good shade.

The verb *ema'ai* takes both an undergoer and a recipient, although generally one is realized as zero anaphora. Thus, in (27) the undergoer is realized as zero anaphora due to discourse considerations. Neither the undergoer nor the recipient generally take nominal case marking.[6]

A plural recipient, like a plural beneficiary, will trigger the plural absolutive prefix *i-*, as seen in (29).

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[6] I have found one sentence in which the indirect object is marked as GOAL.

Moo-ro, roi-do-'o irei r-ema'ai madei...
1s-ERG 2s-GOAL-VOC that 1PER-give word
The words I have given you...

I do not have any explanation for this.

(29) Ohio-bai'oi im-i-ma'ai nu...
boy-group ?-PA-give 3s
She gave it to the boys...

The implied undergoer in this clause is *mi'oi* 'soup'. Since *mi'oi* is singular, it should not trigger the plural absolutive prefix. Therefore, the prefix must be agreeing with the plural recipient. Since the recipient does not take nominal case marking and triggers the plural absolutive prefix, I conclude it is a core relation.

In this analysis I am proposing that *ema'ai* consists of the prefix *Vm-* plus a root, with the prefix indicating the presence of the recipient. If this is true, the root *a'ai* should take an undergoer. There is, in fact, a root *a'ai* 'to do' which can be used in a number of constructions. First, it can occur with other verbs as shown in (30).

(30) Oboi-ro aipoi a'ai bia.
woman-ERG clear.garden do NEG
Women do not clear the bush.

It is not clear what meaning is added by *a'ai* in examples like this, as it can be omitted with no apparent change in meaning.

More commonly *a'ai* is used with nouns as in (31-33).

(31) Ka mahuai r-a'ai-mo, ore, ore du mahuai.
and feast 1PER-do-PL grub grub sago feast
And we make a feast, a feast with grubs and grub sago.

(32) Tomioi p-a'ai...
traditional.dress FAR-do
He dressed up...

(33) Mo ure r-a'ai.
1s cough 1PER-do
I'm coughing.

The nouns in (31-32) are concrete nouns, while the noun in (33) is abstract. Other collocations of abstract noun + 'do' include *mari a'ai* 'do a laugh,' and *toe a'ai* 'do a fear.' The semantic link between the unaffixed and affixed verbs *a'ai* and *ema'ai* is not as obvious as in the cases of unaffixed and affixed verbs discussed in sect. 3.1. It is a fact, however, that *a'ai* normally takes an undergoer, while *ema'ai* takes both an undergoer and a recipient. Thus it is at least plausible that the presence of a recipient relation is indicated by the verbal affix *Vm-*. As in the case of beneficiary, then, the prefix indicates the presence of an additional core relation.

This analysis of the recipient relation is somewhat clouded by the fact that while *ema'ai* seems to be the most common form of 'to give,'

the forms *omoho*, *oha*, and *omoha* are also used by some individuals. In many cases a single speaker will use more than one form of the verb. It is unclear if *om* in *omoho* or *omoha* is synchronically analyzable as a prefix. In the case of *omoho*, there is no form *oho*. In the case of *oha* and *omoha*, there does not seem to be any difference in meaning between the two forms; *oha* means 'to give' even though it clearly does not take a prefix. Example (34) consists of two consecutive sentences taken from a single text.

(34) Irai nimo merei-ro r-i-m-oha-dumo nau-ka.
but 1p person-ERG 1PER-PA-Vm-give-PR thing-DEC
But our children gave us things.

Nimo himia iomoto merei-ro, r-i-ha-dumo nau-ka.
1p self care.for person-ERG 1PER-PA-give-PR thing-DEC
The children whom we ourselves took care of gave us things.

The speaker used *imoha* (from *i+omoha*) in the first sentence and *iha* (from *i+oha*) in the second in apparently identical contexts. In spite of these problematic areas, it seems clear that the recipient relation is a core relation since it does not take nominal case marking and it does trigger the plural absolutive prefix. Thus, it seems reasonable to claim that the initial *em* in *ema'ai* and the initial *om* in *omoha* and *omoho* is the prefix *Vm-*.

3.3 Addressee

A third semantic relation, addressee, seems to function as a middle-ground relation. Since syntactically it behaves differently from beneficiaries and recipients, however, I am dealing with it separately. The addressee relation occurs with verbs of speaking. For example, *a'o* can be used as 'to say' without introducing a quotation as in (35), or to introduce a quotation as in (36-37).

(35) Ro a'o-i a'ai madei ne'ei-da.
2s say-? FUT word place-LOC
You will say your words onto the tape.

(36) Ka aaba-ro a'o-i-ka, "...
and father-ERG say-?-DEC
And father would say, "...

(37) Kaida p-a'o-mo nu-ido, "...
then FAR-say-PL 3s-GOAL
And then they said to him, "...

When *a'o* is used to introduce a quotation, the addressee does not need to be specified, as shown in (36). If the addressee is specified, however, as in (37), it is marked with the nominal case marking *-ido*. In

addition, as shown above in (18), repeated here as (38), a plural addressee does not trigger the plural absolutive marker *i-* with the verb *a'o*.

(38) Kaida pi-r-a'o ni-ido, "...
then FAR-1PER-say 3p-GOAL
And then I said to them, "...

The presence of nominal case marking and the absence of verbal affixation indicates the addressee is a peripheral relation with the verb *a'o*.

When *a'o* is prefixed with *Vm-* it can also be used without introducing a quotation as in (39) or introducing a quotation as in (40-41).

(39) Ida i-m-a'o-ka nu-ro.
then PA-Vm-say-DEC 3s-ERG
Then he told them.

(40) Merekehi em-a'o-ka, "...
child Vm-say-DEC
He told a child, "...

(41) Uei-ro Uei go'oto ubi i-m-a'o-ka, "...
Uei-ERG Uei village people PA-Vm-say-DEC
Uei told his village people, "...

In (40-41) the addressee relation takes no nominal case marking with the verbs *ema'o* and *ima'o* (from *i+ema'o*). In addition, a plural addressee triggers the plural absolutive prefix *i-* in (39,41), even when the plural addressee is realized as zero anaphora as in (39). With the verb *ema'o*, then, the addressee is a core relation.

Another verb of speaking is *aho'o* 'to call,' as shown in (42-43).

(42) "Ere, Umai-o," Umai-ito im-aho'o nu.
oh Umai-VOC Umai-GOAL ?-call 3s
"Oh, Umai," she called to Umai.

(43) Kiauka nu em-aho'o-ika.
finish 3s Vm-call-DEC
Finally they told him.

As in the case of *a'o*, in (42) the addressee occurs as a peripheral relation marked by the nominal case marking *-ito* with the verb *aho'o*, while it occurs as a core relation with the prefixed form *emaho'o*.

In summary, the treatment of the addressee relation is different than the treatment of the beneficiary and recipient relations. Neither

the beneficiary nor recipient relations are marked by nominal case marking; their presence is indicated by verbal agreement affixation. Both relations are always treated as core relations. The addressee relation, on the other hand, can be marked either by nominal case marking in which instance it is considered peripheral, or by verbal agreement affixation in which instance it is considered core. In the case of all three relations, however, the presence of the verbal prefix *Vm-* always indicates the presence of an additional core relation.

4 The functions of *Vm-*

Although the prefix *Vm-* is used to indicate the presence of the middle-ground relations of beneficiary, recipient, and addressee as core relations, its use is not limited to these relations. In sect. 4.1 I examine the use of *Vm-* to mark the presence of certain undergoer relations. Then in sect. 4.2 I discuss instances of multiple occurrences of *Vm-*. Finally, in sect. 4.3 I present some problematic occurrences of *Vm-*.

4.1 Undergoers

As was outlined in sect. 2.1, the undergoer relation does not take nominal case marking. In addition, its presence is not generally indicated by the prefix *Vm-*. An example is (44).

(44) Tiramu-ro nimo r-i-a'a-maka.
Tiramu-ERG 1p 1PER-PA-see-MID
Tiramu sees us.

The fact that the verb takes the first person marker *r-* and the plural absolutive marker *i-*, along with the fact that *nimo* does not take any nominal case marking, is evidence that the undergoer is a core relation.

There are two groups of verbs in Kope which are basically intransitive, but can take an undergoer when prefixed with *Vm-*. The first group includes at least two verbs, *oru'o* 'to wash' and *uta'a* 'to lie down'. Examples of *oru'o* 'to wash', are given in (45-46) with and without the prefix *Vm-*.

(45) Nu p-oru'o.
3s FAR-wash
He washed (himself).

(46) Nu-ro merekehi p-om-oru'o.
3s-ERG child FAR-Vm-wash
He washed the child.

The unprefixed verb *oru'o* in (45) seems to be intransitive, while the prefixed verb *omoru'o* in (46) takes an undergoer.

Similarly, the unprefixed form of the verb *uta'a* 'to lie down' does not take an explicit undergoer. When this verb is prefixed with *Vm-*, however, it takes an explicit undergoer as seen in (47).

(47) ...boomoi aiha p-om-uta'a.
pig ? FAR-Vm-lay.down
...laid the pig down.

Both *oru'o* and *uta'a* are logically reflexive in that they have an implied undergoer that is coreferent with the actor of the clause. The implied undergoer is not indefinite; that is, (45) cannot mean 'he washed someone'. Neither verb, however, may take an explicit undergoer. The prefixed verbs *omoru'o* and *omuta'a*, on the other hand, take an explicit undergoer which cannot be coreferent with the actor. Like other undergoers, those here do not take nominal case marking. Unlike other undergoers, however, their presence is indicated by the verbal affix *Vm-*. The undergoer relation is always a core relation, although it is marked in different ways depending on the verb involved.

The second group of basically intransitive verbs which can take an undergoer when prefixed with *Vm-* are the verbs of motion. In terms of overall frequency in text, in fact, the most common use of *Vm-* is on intransitive verbs of motion. There are a large number of such verbs indicating various directions. A few examples are given in (48).

(48)

o'u	come
odau	go
odoro	come in
ohau	come out
ohi'iai	come close
idiai	go away from the river
odoi	go toward the river
ahebui'a	go in
ahemai	go into water
oruo	go down
ioro	go up
iorai	go up slightly

These intransitive verbs of motion do not take any undergoer, explicit or implied. When they are prefixed by *Vm-*, however, transitive verbs result. Examples are given in (49-51).

(49) Hiou Taubada-ro r-i-m-ohu'o ara hapuou eito.
here European-ERG 1PER-PA-Vm-come.out this side GOAL
The Europeans brought us out to this side.

(50) ...hapuo oto-ra tu-rai obo-ro i-m-odaui a'ai...
side leg-and arm-and woman-ERG PA-Vm-go FUT
...his wife would take the legs and arms from one side...

(51) ...iha na meameaioi i-m-o'ui-kaumo tamai-da...
very thing good PA-Vm-come-PR skin-LOC
...they are bringing very good things on their bodies...

The sense of the transitive verb in each sentence is 'to take' or 'to bring'. The added relation in each sentence is an undergoer. Although the undergoer in (49) is realized as zero anaphora, the prefix *r-* indicates a first person core relation. Since the actor, *Taubada*, is not first person, the implied undergoer must be a core relation. In (50-51), the undergoers do not take any nominal case marking. Finally, the fact that the undergoers are plural in each of the examples triggers the plural absolutive prefix *i-* on the verb. All of these facts argue that the undergoer is a core relation.

The transitive verbs derived from verbs of motion are ambiguous since the prefix *Vm-* can also be used to indicate the presence of a beneficiary relation as seen in (24) above, repeated here as (52).

(52) Obo aiha p-om-ohau i-emeheai ne'ei-da...
woman ? FAR-Vm-come.out ?-leave.ST place-LOC
He came out for the wife, to the place he left her...

In cases of ambiguity, the context differentiates between the various meanings.[7]

4.2 Multiple prefixes

It is possible for a verb root to be doubly affixed with *Vm-* as shown in (53-55).

(53) Ka aaba-ro, na upai em-idi-ka,
and father-ERG fish rolled.fish Vm-roll.fish-DEC
And father, when they rolled fish for him,

om-om-odai-ka em-a'ai-ka...
Vm-Vm-go-DEC Vm-do-DEC
would take it for him and give it to him...

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[7] Further ambiguity can arise from the fact that some of these verbs have idiosyncratic meanings. For example, while *omohau*, from *ohau* 'to come out', may mean either 'to bring out' or 'come out for', it generally refers to either giving birth or fathering as in the following example.

Mo Imobai-ro pi-r-om-ohau.
1s Imobai-ERG FAR-1PER-Vm-come.out
Imobai fathered me.

(54) Nu go'ooto uubi boomoi im-i-m-om-ohau...
3s village people pig ?-PA-Vm-Vm-come.out
He brought out the pig for the village people...

(55) ...ooboi goe aiha p-em-eidai, goe-ra uha-ra.
woman betelnut ? FAR-Vm-get betelnut-and leaf-and
...he got his wife betel nut, betel nut and uha leaves.

Naa m-om-om-o'u, kudu.
this ?-Vm-Vm-come tobacco
He brought them for her, with tobacco.

In each of these examples a basic intransitive motion verb has been doubly prefixed. The resulting verb takes both an undergoer and beneficiary relation. Neither takes nominal marking. The presence of each relation is indicated by a separate occurrence of the verbal prefix *Vm-*.

4.3 Problematic forms

In sect. 3.2 it was noted that the presence or absence of *Vm-* does not seem to make any difference in the pair *omoha/oha*. Another verb which seems to pattern the same way is shown in (56).

(56) Hoho atai aiha p-omo'oi;
face another ? FAR-tie
He tied the one end,

aiha p-em-ehe'eai hoho atai im-otohiiti;
? FAR-Vm-turn.over face another ?-wrap
he turned it around and wrapped the other end,

ipi aiha p-om-omo'oi.
middle ? FAR-Vm-tie
he tied the middle.

The verb *omo'oi* is used in the first clause while *omomo'oi* is used in the last clause in this example, but there does not seem to be any difference between the two in meaning or number of relations each takes.

There are also other verbs in which the function of *Vm-* is unclear. An example is given in (57).

(57) Urai oomoi; oomoi urai.
close river river close
They closed the river (with a net); they closed the river.

Nai aiha im-om-urai-ka...
fish ? ?-Vm-close-DEC
All the fish were blocked...

The verb *urai* 'to close' is used three times in this example. The first two occurrences are unaffixed and take *oomoi* 'river' as the undergoer. The last occurrence is prefixed and takes *nai* 'fish' as the undergoer. The noun *nai* 'fish' cannot occur as an undergoer with the verb *urai* 'to close', since *urai* requires an undergoer which can be opened and closed. It is not clear what additional meaning is added by the prefix *Vm-* which would account for the change in meaning of the verb.[8]

5 Some typological observations

In sect. 1, Foley's (1986) distinction between core and peripheral relations was outlined. Syntactically, Foley claims the standard case marking strategy in Papuan languages is "verbal affixation for the core participants and nominal case for the peripheral ones" (p. 96). Verbal affixation is defined more precisely as "the presence of affixes to the governing verb agreeing in person and number, and often in gender, with a nominal of a particular case relation" (p. 93), while nominal case marking, as defined in sect. 2.1, includes postpositions. Given these definitions, Kope fits quite neatly into Foley's typology thus far.

The treatment of the middle-ground relations of beneficiary and recipient in Kope does not fit so neatly into Foley's typology. Foley outlines three marking strategies for middle-ground relations. One pattern is for all beneficiaries and recipients to take nominal case marking, and be treated as peripheral relations. This is obviously not the case in Kope. A second pattern is for all beneficiaries and recipients to be marked by verbal agreement affixation, and be treated as core relations. While beneficiaries and recipients are marked by verbal agreement affixation, addressees, which are closely related to recipients, can be marked either by verbal affixation or nominal case marking.

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[8] Stephen Levinsohn (p.c.) has suggested that there may be a causative or benefactive relation which could be paraphrased as 'They caused the fish to be blocked in' or 'They closed the river to the benefit/detriment of the fish.' This second possibility is intriguing, although I have no evidence that *Vm-* can ever be used in a detrimental situation.

The final pattern noted by Foley is for the beneficiary to be indicated by either verbal affixation or by nominal case marking. This is what is found in addressees in Kope. However, concerning this pattern, Foley states:

> In all such attested cases, there is no simple dative case corresponding to both recipients and beneficiaries, but a distinct case for each; and the alternation applies only to beneficiary nominals, as recipients are unexceptionally core. (Foley 1986:97)

In Kope, however, recipients and beneficiaries are marked identically, while the alternation applies only to addressees, not to beneficiaries.

A subtype of this final pattern which is of interest in Kope is that reported for the unrelated highlands languages of Fore, Hua, and Dani. In these languages Foley reports that when the beneficiary is core, the verb is a compound verb including either 'to give' or 'to put'. Foley gives the following examples from Hua (taken from Haiman (1980:352-53)[9]) to illustrate this.

(58) Dgai-si' zu' kie.
1s-BEN house build.3s
'He built a house for me.'

(59) Zu' ki-na d-te
house build-3s 1s-put.3s
'He built me a house.'

Haiman's (1980:352-54) discussion of this pattern in Hua makes it clear it is restricted in a number of respects. First, the verbal construction in (59) cannot be used with a full noun phrase, while the nominally case marked form can. Second, the basic verb in the verbal construction must be transitive. Kope differs from Hua in both these aspects. However, it is interesting that the same verbal prefix is used for 'to give' as for beneficiaries, and that the relation between the derived verb *ema'ai* and the proposed basic verb *a'ai* is not semantically transparent. This raises the possibility that what is now the verbal prefix *Vm-* may actually have been the verb 'to give' at one time. In this scenario, the verb 'to give' would have been used to indicate the presence of the beneficiary. Later, the verb could have lost its status as an independent verb, being prefixed to the verb *a'ai* 'to do' to express its original meaning of 'to give'. Finally, the prefix could have been generalized to indicate the presence of any core relation not taken by the unprefixed verb.

Summarizing the present use of the verbal prefix *Vm-* in Kope, it always indicates the presence of an additional core relation. It does

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[9] I am following Haiman's transcription where it differs from Foley's.

not, however, mark one, but four semantic relations. The specific properties of *Vm-* depend on which relation it is indicating. These properties fall into four categories: 1) what type of verb can take the relation in question, 2) whether the semantic relation between the unprefixed and prefixed form of the verb is transparent or not, 3) whether the relation in question must be indicated by the verbal affixation of *Vm-*, and 4) whether the relation is core or peripheral if its presence is not indicated by verbal affixation. This information can be summarized as follows.

Beneficiary:

1. can be used on almost any verb
2. semantic relation is transparent
3. must be indicated by *Vm-*
4. not applicable

Recipient:

1. can only be used on *a'ai* (ignoring the dialectal forms *omoha* and *omoho*)
2. semantic relation is not transparent
3. must be indicated by *Vm-*
4. not applicable

Addressee:

1. can only be used on verbs of speaking such as *a'o* 'to say' and *aho'o* 'to call'
2. semantic relation is transparent
3. alternatively, can be marked by nominal case marking *-ito*
4. peripheral when marked with nominal case marking

Undergoers:

1. apparently can only be used on verbs which have implied reflexive meaning or verbs of motion
2. semantic relation is transparent
3. other verbs can take undergoers with no verbal affixation
4. core when unmarked for other verbs

More typological study is needed to see if similar prefixes are found in other Papuan languages.

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UNMARKED AND MARKED INSTANCES OF TOPICALIZATION IN HEBREW[1]

Stephen H. Levinsohn

1 Introduction
2 Beneš' characterization of topicalization as bidirectional
3 Topicalization and discontinuities in the storyline
4 Topicalization and backgrounding
5 Marked instances of topicalization
Notes
References

1 Introduction

My aims in this paper are twofold: first, to spell out the normal or UNMARKED function of topicalization (as defined below) in narrative discourse; and second, to consider what Sperber & Wilson call the "additional contextual effects" (1986:196) that MARKED or apparently redundant instances of topicalization are intended to achieve in Hebrew.

In sect. 2, I argue in favour of Beneš 1962 characterization of topicalization as bidirectional. It not only serves "as point of departure for the communication", but also provides the basis for linking the communication to its context. I then review my 1987 work on the relation between topicalization and what Givón (1983:8) calls "discontinuities" (cf. also Lambdin 1971:62): discontinuities in the flow of the story, in the spatio-temporal setting or in the cast of participants (sect. 3). In sect. 4, I consider why topicalization is often associated with backgrounding, but argue that Longacre (1989) is wrong in treating ALL topicalized sentences in Hebrew as backgrounded. Finally, in sect. 5, I examine examples of marked topicalization, i.e. passages in which there is no evidence of a discontinuity in the story yet topicalization occurs, and claim that the intended effect of marked topicalization is to highlight a key event which is to follow.

I first need to define the SCOPE of this paper. I am concentrating on the fronting of elements in sentences with what Andrews (1985:77ff) calls "topic - comment articulation". Thus, I am concerned with sentences like (1):[2]

(1) (8:14) &-in-month the-second... 3SF-was-dry the-earth.
(And in the second month...[3] the earth [TOPIC] was dry [COMMENT].)

I am NOT discussing sentences with what Andrews calls "focus -

presupposition articulation". In such sentences, an element is fronted for focus, as in (2):[4]

(2) "The SECOND month [FOCUS] was when the earth dried up [PRESUPPOSITION]."

Returning, then, to sentence (1), Halliday (1970:161) would divide this sentence into two functional parts: a sentence topic "in the second month", and a comment "the earth was dry".[5] I do not follow Halliday's analysis. Rather, I consider that a comment ("was dry") is being made about the sentence topic "the earth" and that the sentence topic is preceded by the "topicalized" (Andrews 1985:79) element "in the second month". In Hebrew, this phrase precedes the verb.

Thus, I divide sentence (1) functionally as shown in (1'):[6]

(1') In the second month / the earth / was dry.
TOPICALIZED ELEMENT / SENTENCE TOPIC / COMMENT

2 Beneš' characterization of topicalization as bidirectional

Discussions of the function of topicalized elements tend to focus on what follows it in a discourse. Thus, Chafe (1976:50) says that a preposed element "sets a spatial, temporal or individual domain within which the main predication holds."

Recently, however, a number of linguists have recognized that topicalized elements are as much backward-looking as forward-looking (e.g. Prince 1982). This insight should probably be credited to Beneš. Back in 1962, he wrote that what he called the BASIS, "serving as a point of departure for the communication, is directly linked to the context" (Garvin's translation; 1963:508).

A number of writers have also observed that topicalized elements (bases) are "either **already evoked** in the discourse or else in a... **set relation** to something already evoked in or inferrable from the discourse" (Andrews 1985:78). This set relation is called "switch" by Andrews, and "replacement" by myself (1980:3; 1987:180).

I now illustrate how topicalized elements in Hebrew indicate the basis for relating what follows to the context. In narrative, such bases are most commonly (in Chafe's words) "spatial, temporal or individual". In the Hebrew of Genesis, spatial bases are rare,[7] temporal bases more common, and "individual" bases very common in narrative.

Passage (3) illustrates two TEMPORAL bases (one with and one without an introductory **wayhi** [&-3S-was] "and it happened; 8:13a,14"). In both cases, the new temporal setting REPLACES the previous one (whether stated or implied). In Andrews' words, there is a SWITCH relation between the previous temporal setting and the new one. In

Beneš terms, the BASIS for linking the new sentence to the context is temporal.

(3) (8:12) (Noah waited seven more days and sent the dove out again, but this time it did not return to him.)

(13a) &-3S-was ON-FIRST &-SIX HUNDRED YEAR ON-FIRST ON-FIRST TO-MONTH 3P-dried-up the-waters from-on the-earth

(13b) &-3S-removed Noah covering-of the-ark

(13c) &-3S-looked &-see 3P-were-dry surfaces-of the-ground.

(14) &-ON-MONTH THE-SECOND... 3SF-was-dry the earth.

(And it happened, by the first day of the first month of Noah's 601st. year, that the water had dried up from the earth.
And Noah removed the covering from the ark
and saw that the surface of the ground was dry.
And by the second month... the earth was dry.)

Passage (4) illustrates three INDIVIDUAL bases. The first (18:10b) indicates a switch of attention from (the conversation between) the LORD and Abraham (v10a) to "Sarah" (describing what she was doing while the conversation was proceeding). The second (v10c) indicates a switch from Sarah to "the tent", which had been "already evoked in the discourse" (Andrews 1985:78). The third (v11) indicates yet another switch, from the tent to "Abraham and Sarah". In all three cases, the basis or topicalized element is also the sentence topic about which a comment is made.

(4) (18:10a) (And He said [to Abraham], "I will surely return to you about this time next year, and Sarah your wife will have a son.")

(10b) &-SARAH listening entrance-of the-tent.

(10c) &-IT behind-him.

(11a) &-ABRAHAM &-SARAH old-ones being-advanced in-days...

(12) &-3SF-laughed Sarah to-herself...

(Now Sarah was listening at the entrance to the tent.
It was behind him.
Abraham and Sarah were already old and well advanced in years...
And Sarah laughed to herself...)

Passage (5) illustrates an occasion on which the sentence topic of one clause (Noah; 7:5) becomes the basis (as well as the sentence topic) of the next (v6a). (The passage continues with a switch from Noah to "the flood", which had been alluded to in the speech of v4.)

(5) (7:5) &-3S-did Noah as-all that 3S-commanded-3SO YHWH.

(6a) &-NOAH son-of 600 year.

(6b) &-THE-FLOOD 3S-was waters on the-earth.

(7) &-3S-entered Noah... into the-ark...

(And Noah did all that the LORD commanded him.
Noah was 600 years old
and [when] the floodwaters came on the earth.
And Noah... entered the ark...)

In each of the above passages, the topicalized element is the basis for relating the new sentence to the context. It replaces or reiterates a corresponding element of the context, this being either stated or inferred. Thus, whether the topicalized element replaces or reiterates an element of the context, it is always anaphoric (cf. Werth 1984:61ff).[8]

3 Topicalization and discontinuities in the storyline

As many writers have observed, the storyline or main events of a Hebrew narrative tend to be presented with the verb first in the clause and in the preterite or **wayqtl** form. Longacre (1989:65), for example, cites with approval the 1910 grammar of Gesenius - Kautzsch - Cowley on this point.

Typically, the relationship between such clauses is "conjunctive-sequential,... the second clause is temporally or logically posterior or consequent to the first" (Lambdin 1971:162). Between the events described in such clauses there is "topic continuity" (Givón 1983:8) and "continuity of situation" (Levinsohn 1987:66). That is to say, the SAME basic storyline is being developed, and no sudden change or discontinuity in the spatio-temporal setting or in the cast of participants is indicated. Rather, modifications are made to the EXISTING scene and cast.[9]

Passage (6) illustrates this continuity in the storyline. On semantic grounds, English translations commonly begin a new paragraph at 2:8a, reflecting the centrality of the garden in the following sentences. At the same time, the verb-initial clauses suggest overall topic continuity throughout the passage. This is reflected in the content of the clauses. The preterite is used throughout, and the events are presented without any stated changes in the temporal setting (contrast the New International Version, which translates 2:8a with a

pluperfect). A new participant (man; 2:7a) and a prop (garden; 2:8a) are introduced into the existing scene. Similarly, in 2:8b, the man is reintroduced into the existing scene. Even the location of 2:8a (in the east, in Eden) is specified, rather than presented as being in contrast with some other location. (No specific location is indicated for the events of 2:4-7.) Thus, the existing scene and cast are modified, as the passage progresses, and continuity in the storyline is maintained.

(6) (2:7a) &-3S-formed YHWH God the-man dust from the-earth

(7b) &-3S-breathed in-his-nose breath-of life

(7c) &-3S-became the-man into-being living

(8a) &-3S-planted YHWH God garden in-Eden in-east

(8b) &-3S-put there the-man that 3S-formed.

(And the LORD God formed man from the dust of the ground
and breathed into his nostrils the breath of life,
and man became a living being.
And the LORD God planted a garden in the east, in Eden,
and put there the man he had formed.)

When a topicalized element precedes the verb, in contrast, the relationship with the context is "disjunctive" (Lambdin 1971:162); there is a discontinuity in the storyline.
-In (3), the discontinuity is temporal: changes of temporal setting.
-In (4), the discontinuity is "individual"; attention switches from the conversation between Abraham and the Lord to Sarah, from her to the tent, and from the tent to Abraham and Sarah as a couple.
-In (5), the discontinuity is in the flow of the story; the main events of the story are interrupted, in order to introduce two background comments (7:6a,b), each with its own topicalized sentence topic. Once the comments are completed, the main events resume, encoded once more with verb-initial clauses (v7), since there is continuity between the events of v5 and v7. (Cf. also the continuity, in passage (4), between the events of 18:10a and 18:12.)

Example (7) illustrates a passage in which two events occur at different times, yet the temporal expression is not topicalized in the second sentence. By beginning the sentence with a verb, continuity is signalled between the first event and the second (the command and an appropriate response to the command). If the temporal expression had been topicalized, the basis for relating the events would have been by a change of temporal setting, and the command - response relationship would have been obscured. By not topicalizing the temporal expression, continuity between the command and the response is maintained.

(7) (21:12) (God said to him [Abraham], "Do not be so distressed about the boy and your maidservant. Listen to whatever Sarah tells you...")

(14) &-3S-rose Abraham IN-MORNING...

(Abraham rose the next morning... and sent [the maidservant] off with the boy) [as Sarah had requested; 21:10].

Thus, when a verb-initial clause is employed to encode an event of a narrative in the Hebrew of Genesis, topic continuity and continuity of situation with the event which preceded it is implied. When the clause begins with a topicalized element, a discontinuity in the storyline is indicated.

It is perhaps worth pointing out that discernment of continuity or discontinuity, in any particular instance, is a pragmatic decision of the WRITER. Frequently, two events could in theory be presented as being in a relationship of continuity or of discontinuity. The constituent order of Hebrew reflects the relationship which the writer actually perceived.

This is illustrated in passage (8). English versions tend to introduce 12:17 with 'but', reflecting perhaps the contrast between Pharaoh's treatment of Abram (v16) and the Lord's treatment of Pharaoh. Conceivably, v17 could have begun with a topicalized reference to Pharaoh (or to YHWH), indicating a switch of attention from Abram (or from Pharaoh). By beginning v17 with a verb, however, the writer has indicated continuity with an earlier event (in this case, v15c; cf. footnote 8).

(8) (12:15c) (And the woman was taken into Pharaoh's house.)

(16a) &-TO-ABRAM 3S-did-good for-her-sake

(16b) &-3S-had sheep &-oxen &-he-asses...

(17a) &-3S-plagued YHWH Pharaoh with-plagues great...

(He treated Abram well for her sake,
and Abram acquired sheep and cattle, male and female donkeys...
But the LORD inflicted serious diseases on Pharaoh...)

4 Topicalization and backgrounding

In his recent work on the Joseph narrative in Genesis, Longacre (1989:80f) maintains that sentences whose verb is in the perfect or qtl form and which begin with a noun present "backgrounded actions". Bailey (forthcoming, sect. 3.6) disputes this claim at length, and cites a variety of apparent counter-examples. I therefore only outline Bailey's argument here.

If a Hebrew clause begins with a verb, the verb may be in the preterite or the "perfect" (among others).[10] Longacre argues that clauses with a preterite present the main events of a narrative, whereas those with a "perfect" describe backgrounded actions (ibid). Bailey accepts this position.

When a clause does NOT begin with a verb, however, the PRETERITE CANNOT OCCUR. Consequently, the foreground versus background distinction based on the use of the preterite versus the "perfect" is potentially neutralized. In Bailey's opinion, this neutralization actually occurs, and he cites as confirmation a number of passages which involve preverbal elements fronted for either focus or topicalization. In such passages, some clauses with preverbal elements and the perfect appear not to be presenting backgrounded information.

Passage (9) illustrates Bailey's claim. Longacre's analysis predicts that both 4:4a and 4:5a present backgrounded actions, since the perfect is used. In contrast, v3b and v4b present foreground actions, since they are presented with the preterite.

Such an analysis appears to be counter-intuitive. The clauses with topicalized phrases are compared and contrasted with those that precede them, and appear to be just as important as them. It does not seem reasonable to consider them to be backgrounded with respect to those with which they contrast.

(9) (4:3b) &-3S-brought Cain from-fruit-of the-earth offering to-YHWH

(4a) &-ABEL 3S-brought also he from-firstborn-of his-flock...

(4b) &-3S-accepted YHWH to-Abel &-to-his-offering

(5a) &-TO CAIN &-TO-HIS OFFERING not 3S-accepted.

(And Cain brought some of the fruits of the soil as an offering to the LORD.
And Abel brought... portions from some of the firstborn of his flock.
And the LORD looked with favor on Abel and his offering,
but on Cain and his offering he did not look with favor.)

The NATURE of topicalization explains why a majority of clauses with preverbal elements are backgrounded. Because topicalization indicates discontinuity, many clauses with preverbal elements occur at the beginning of "new narrative units" (Fox 1987:168; Longacre's "episodes"). For example, cf. the topicalized expressions presenting new temporal settings in passage (3). Consequently, such clauses may naturally be viewed as presenting actions of a preliminary, backgrounded nature. Similarly, because background comments represent a break or discontinuity in the storyline, they typically begin with a topicalized sentence topic, as passages (4) and (5) have shown.

It does not follow, however, that ALL clauses which begin with a topicalized element are backgrounded. In other words, topicalization is not per se a backgrounding device.[11]

I conclude, therefore, that topicalized clauses in the perfect in Hebrew cannot be allocated to a single band in Longacre's verbal rank scheme for narrative discourse. Until their context is examined, it is not possible to know whether such clauses present storyline events (Band 1) or background activities (Band 2).[12]

5 Marked instances of topicalization

In sect. 3 I argued that the topicalization of an element indicates a discontinuity of some sort in the storyline. I now consider passages in which NO discontinuity is evident, yet topicalization occurs.

Sperber & Wilson claim that, when an apparently inappropriate construction is used, the writer "must have expected to achieve some additional contextual effects not obtainable" from using the equivalent unmarked construction (1986:196). Thus, when topicalization is found in an apparently inappropriate context (viz. in the absence of a discontinuity), the purpose will be to achieve additional effects. In the case of Hebrew, I argue that the intended effect of such 'redundant' topicalization is highlighting.

Example (10) is representative of a number of passages which Bailey considers to occur "at narrative high points" (forthcoming, sect. 3.6.3; Longacre's discourse "peak"; 1989:286). In this passage (and in the others he cites), topicalization initially is found in connection with a preliminary event which is presented without the conjunction waw (44:3a; itself an unusual feature in the context of narrative events). Topicalization occurs also in connection with the key event to which the earlier event was leading (v4c) plus any further preliminary events that intervene (vv3b,4a).

What is significant about these clauses is that one or more of the topicalizations is not warranted on the ground of discontinuity. For example, if v3a is interpreted as a replacement temporal basis, as in passage (3), then topicalization of the reference to the individuals in v3b is not warranted as well.

(10) (44:2) (And he [Joseph's steward] did as Joseph said.)

(3a) THE-MORNING 3S-dawned* [*or "light"]

(3b) &-THE-MEN 3P-were-sent they &-their-donkeys

(4a) THEY 3P-went-from the-city

(4b) Not 3P-went-far

(4c) &-JOSEPH 3S-said to-that over his-house...

(Morning dawned,
and the men were sent on their way with their donkeys.
They had not gone far from the city
and [when] Joseph said to his steward, "Go after those men...")

(Cf. also 19:23-25; 38:25.)

It thus appears that, as Bailey's "narrative high point" label implies, such marked instances of topicalization occur to contribute to the effect of HIGHLIGHTING a key event which is to follow.

In a few passages, an ISOLATED reference to a minor participant or prop is topicalized, even though no discontinuity in the storyline is discernable. Example (11) is representative of such passages. Although topicalization occurs in 19:6b, there appears to be no discontinuity between the events of v6a and v6b.[13]

The motivation for such 'redundant' topicalization appears again to be that of highlighting the event which immediately follows (in this case, Lot's response of vv7f to the men's demand of vv4f that he bring out his visitors). Verse 6b may thus be viewed as a 'foil', setting off the more significant event which immediately follows it.

(11) (19:4f) (Before they had gone to bed, all the men of the city... surrounded the house. They called to Lot, "Where are the men who came to you tonight? Bring them out to us that we may know them.")

(6a) &-3S-went to-them Lot to-the-outside

(6b) &-THE-DOOR 3S-shut after-him

(7) &-3S-said...

(And Lot went outside to meet them
and shut the door behind him
and said, "No, my friends. Don't do this wicked thing!
Look, I have two daughters... Let me bring them out to
you...")

(Cf. also 19:10d.)

In summary, then, when verb-initial clauses are used in Hebrew, there is continuity in the storyline between the events described in such clauses and previous events of the story. Topicalization typically is used to indicate discontinuities in the storyline, but does not in itself indicate that the events described in such clauses are backgrounded. When topicalization is used but no discontinuity is evident, the writer intends to achieve additional effects. In the case of Hebrew, the effect of such 'redundant' topicalization is that of highlighting a key event which is to follow.

NOTES

1. This paper generally conforms to the analysis of N. Bailey (forthcoming), who argues that all preverbal elements in independent clauses in the narrative of Genesis are either topicalized or focused.

2. The examples cited are all from Genesis, and reflect the order of elements in Hebrew. The free translation generally follows the New International Version, but is modified in places, to more closely reflect the Hebrew. In (3) to (11), topicalized elements are in upper case (in (7), it is the potential basis which is in upper case).

ABBREVIATIONS used: 3P/3S: 3rd. person plural/singular; F: feminine; O: object.

3. Cf. below on the functional status of "in the second month".

4. In oral speech, such sentences are readily distinguished from those with topic - comment articulation, because of the distinctive position and type of stress. Werth (1984) suggests ways in which such sentences may be recognized in written material, as well.

5. Halliday and Beneš both call the sentence topic the "theme", and the comment the "rheme".

6. The following table compares the terms employed by Beneš and Foley & Van Valin (1984:124) to refer to what in this article I call 'topicalized element' and 'sentence topic':

	topicalized element	sentence topic
Beneš	basis	theme
Foley & Van Valin	topic	pivot

7. The clearest example of a spatial basis is found in 18:7. Attention switches from events in the tent to those with the herd.

(18:6) &-3S-hurried Abraham to-the-tent to Sarah &-3S-said, "Quick!..."

(7) &-TO THE-HERD 3S-ran Abraham & 3S-selected calf...
(And Abraham hurried into the tent to Sarah and said, "Quick!..."
And he ran to the herd and selected a... calf...)

8. In Werth's terms, switch or replacement is a "negative anaphoric operation"; reiteration is a "positive anaphoric operation" (ibid.).

Sentences at the beginning of discourses typically open with a topicalized element. Such bases are anaphoric in the sense that they replace a corresponding element of the context in which the discourse was uttered or written. For instance, the topicalized temporal expression which opens Genesis ("in-beginning"; 1:1) replaces the time of composition of the book by the temporal setting for the story.

9. Bailey (forthcoming, sect. 4) points out that topic continuity is not always with the events described in the immediately preceding sentence or passage. He cites 4:25, which reintroduces Adam and his wife (last mentioned in 4:2), after incidents involving Abel, Cain and Lamech. Concerning the use of a verb-initial clause in 4:25a, Bailey comments, "Here, by means of wayqtl, continuity of the main narrative is emphasized".

10. In fact, it is very unusual for what Longacre calls the "perfect" to occur verb-initial. Dr. Randell Buth (personal conversation) questions, on historical grounds, whether such forms should be identified with the "perfect" which follows a fronted element.

11. This would seem to be confirmed from Koine Greek, another language in which verb-initial clauses suggest overall topic continuity and bases are topicalized. In Greek, following a preverbal element, the distinction between preterite (aorist) and perfect is not neutralized. Consequently, the preterite is commonly used in topicalized clauses in which one clause is compared and contrasted with another, and the second clause presents a main event of the story. (Cf. Levinsohn 1987:10ff,162ff for examples.)

12. Longacre's verbal rank scheme for Hebrew appears to reflect the interaction of a number of parameters, of which topicalization is but one. Longacre himself (forthcoming, MS p.100f) cites E.A. Gutt who "lays out four parameters which he considers to be relevant to the ranking of verbs in Silti narrative" (an Ethio-Semitic language). Since

these parameters (tense, verb status, semantic verb types, mood) are independent of each other, it is unlikely that a single ranking of verbs to reflect "degrees of departure from the storyline" (Longacre 1989:82, footnote 6) is possible for Silti (or Hebrew) narratives.

13. Cf. Levinsohn forthcoming on the topicalization of props and minor participants in Bahasa Malaysia, when there is no discontinuity to warrant topicalization. In that article I argued that the element topicalized was a "temporary topic" whose domain extended over only one sentence. Typically, sentences containing such 'redundant' topicalization are followed immediately by the description of key events. In other words, marked topicalization in Bahasa Malaysia, as in Hebrew, has the effect of highlighting a key event to follow; the event so topicalized may usefully be viewed as a 'foil' which sets off the immediately following event.

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ZAPOTEC PRONOUN CLASSIFICATION

Stephen A. Marlett

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1 Introduction

Zapotec languages have sometimes been described as having two sets of (nonreflexive) personal pronouns: bound and free (Butler 1976), clitic and free (Jones and Church 1985, Marlett 1987), dependent and independent (Pickett 1960, Bartholomew 1983), inseparable and separable (Butler 1980), suffixes and pronouns (Briggs 1961), particles and pronouns (Pickett et al. 1965). The variety of terminology used indicates that the syntax of Zapotec pronouns requires further study. The goal of this article is to clarify the behavior of these pronouns across the Zapotec language family (using a subset of languages to illustrate), noting where these languages are alike or different. A major conclusion of this study is that the traditional division of pronouns used in descriptions of Zapotec is inadequate. Instead, we must think in terms of three classes of pronouns, although it may be that only two of these are attested in a given language. For example, Yatzachi and Yalalag Zapotec lack one class entirely, while Xanaguía Zapotec lacks another class; Isthmus Zapotec has all three classes, but one class has only one member. I describe these pronoun classes by making reference to two separate parameters: *prosodic independence* and *syntactic independence*. Syntactically independent pronouns may be prosodically dependent or independent; prosodically independent pronouns are all syntactically independent. Pronouns which are classified as *prosodically independent* are written below with an acute accent. Pronouns which are *syntactically dependent* are written with an equal sign before them. As a further means of indicating the two parameters, I gloss syntactically dependent pronouns with abbreviations rather than with word glosses.[1] The tables of pronouns given in the appendix follow the classificatory system used in this article.

The account given here of the distribution of pronouns relies on the proper identification of the head of the phrase, namely P as head of PP, N as head of NP, and V as head of the clause. Zapotec languages are head-initial, and for the purposes of the discussion in sect. 3.2, are *verb initial* at the level at which subject fronting takes place.

The pronouns are discussed in the (essentially arbitrary) order of prosodically independent pronouns (sect. 2), syntactically independent pronouns (sect. 3), and then syntactically dependent pronouns.

2 Prosodically independent pronouns

A pronoun in Zapotec is classified in this article as either prosodically dependent or prosodically independent. A pronoun is considered prosodically independent if it occurs in one (or more) of three positions: (a) in isolation, as a simple utterance, such as in answer to a question, (b) preverbally, with nothing to lean on phonologically, (c) as object of a Spanish preposition.

To my knowledge, all third person pronouns in Zapotec are prosodically *dependent*, although I have no account for this apparently significant generalization. Therefore, third person pronouns will be contrasted with non-third person pronouns in the following sections.

Grammatical counterparts of starred sentences in this section can be formed by using a prosodically independent pronoun instead (if one exists), or by using the prosodically dependent pronoun in a complex construction which usually consists of a word cognate with Isthmus Zapotec la$^{?}$ (no obvious concrete meaning) followed by the pronoun.[2]

2.1 Isolation

The pronouns listed as +P (prosodically independent) in the appendix can be used in isolation or with the question particle. (In Xanaguía Zapotec, a similar context is with a deictic following the pronoun.) These pronouns receive their own stress, they do not interact phonologically with adjacent words, and do not lean phonologically on adjacent words.

(1a) (Ist) lí$^{?}$ ya? (Pickett 1960:87)
you Quest
'(and) you?'

(1b) (Xng) tó ga
you there
'it is you (pl.) who are there'

(1c) (Tex) yã́ n
I Quest
'(are you referring to) me?'

(1d) (Ate) ɬi lú?
Quest you
'you?'

Pronouns not listed as prosodically independent in the appendix cannot be used in isolation or before the question particle, as shown in (2).

(2a) (Ist) * ni
it
'it'

(2b) (Tex) * yu
he
'he'

(2c) (Ytz) * =bo?
3f
's/he'

(2d) (Ist) * =be ya?
3h Quest
'and her/him?'

(2e) (Ist) * =lu ya?
2s Quest
'(and) you?'

(2f) (Xng) * šo ga
s/he there
'it is s/he (who is there)'

(2g) (Tex) * mi n
he Quest
'(are you referring to) him?'

(2h) (Tex) * na n
us Quest
'(are you referring to) us?'

(2i) (Ate) * ɬi e
Quest s/he
's/he?'

2.2 Preverbal position

Prosodically independent pronouns may occur in preverbal position without a word to lean on phonologically.[3]

(3a) (Ist) lí? bi?ya =lu ni
you saw 2s it
'you saw it'

(3b) (Tex) yã zañ tir bdug^{y}ĩ? lo ñ
I many times asked/1s face her
'I have asked her many times.'

(3c) (Ytz) náda? g^{w}xoa =a? yet n?
I patted 1s tortilla that
'I made the tortilla'

(3d) (Ist) ná? nga bi?t =e? be?nda ke
I that.one killed 1s snake that
'I am the one who killed that snake'
(Pickett 1960:66)

(3e) (Xng) ná? ǥia
I will.go
'I will go'

(3f) (Xng) tó ǥia
you will.go
'you (pl.) will go'

(3g) (Glv) ná? ča? bak
I go/1s Tlacolula
'I am going to Tlacolula'

Pronouns which are not +P cannot occur preverbally.[4]

(4a) (Ist) * ni biwi?ni (ni)
it got.small it
'it got smaller'

(4b) (Ytz) * =bo? g^{w}dao (=bo?) nada?
3f ate 3f me
's/he bit me'

(4c) (Ist) * =lu bi?ya (=lu) ni
2s saw 2s it
'you saw it'

(4d) (Tex) * yu rk^{y}i?ñ yu nañ yu? wedz
he serves he inside house church
'he serves in the church'

(4e) (Xng) * šo tsia
s/he will.go
's/he will go'

(4f) (Xng) * o giab lo lyu
it will.fall face floor
'it will fall on the floor'

(4g) (Glv) * bɨ bta'z (bɨ) ná'
s/he hit s/he me
's/he hit me'

(4h) (Tex) * na g^{y}a (n)
we will.go we
'we will go'

(4i) (Xng) * šo ǵia
s/he will.go
's/he will go'

(4j) (Ate) * bi ǵia
s/he will.go
's/he will go'

2.3 Object of Spanish preposition

Zapotec languages do not have many prepositions *per se*, but make good use of body part nouns in a functionally similar way (see MacLaury 1989). Prepositions borrowed from Spanish, unlike native words, are followed by prosodically independent pronouns, never by prosodically dependent pronouns.

(5a) (Ytz) par náda? (Butler 1980:249)
for me
'for me'

(5b) (Ytz) g^{w}nn =e? fabor náda? (Butler 1980:248)
spoke 3r for me
's/he spoke in my favor'

(5c) (Tex) par yã́
for me
'with respect to me'

(5d) (Ist) despwes de ná' (Pickett 1960:47)
after of me
'after me'

(5e) (Glv) par liú'
for you
'for you'

(6a) (Ytz) * par =a?
for 1s
'for me'

(6b) (Ytz) * g^{W}nn =e? fabor =a?
spoke 3r for 1s
's/he spoke in my favor'

(6c) (Tex) * par na
for us
'with respect to us (incl.)'

(6d) (Ist) * despwes de =be
after of 3h
'after him/her'

(6e) (Ist) * despwes de ni
after of it
'after it'

(6f) (Glv) * par bɨ
for him/her
'for him/her'

3 Syntactically independent pronouns

The second major parameter along which I classify Zapotec pronouns is that of syntactic independence. Any pronoun which is prosodically independent is also syntactically independent, but the opposite is not necessarily true since some syntactically independent pronouns are not prosodically independent. The relevant additional test for syntactic independence depends on whether the pronoun may occur in object of verb position *following a nonpronominal subject*. It is in this position that the pronoun is not adjacent to something which might be considered the head (or a projection of the head) of the construction.[5]

(7a) (Ist) bi?ya ale lí?
saw Alex you
'Alex saw you'

(7b) (Ist) bi?ya ale ni
saw Alex it
'Alex saw it'

(7c) (Yts) g^{W}dao beko? na?nə? náda?
ate dog that me
'that dog bit me'

(7d) (Ytz) g^{W}dišX^{W} delin náda? ši pes
payed Adelina me ten peso
'Adelina paid me ten pesos'
(cf. Butler 1980:173)

(7e) (Xng) usaʔn xul lúʔy / aʔ
left Julia you you
'Julia left you'

(7f) (Xng) usáʔn xul n
left Julia us
'Julia left us (inc.)'

(7g) (Xng) usáʔn xul o
left Julia it
'Julia left it'

(7h) (Tex) kut li n
will.kill María us
'María will kill us'

(7i) (Tex) kut li ñ
will.kill María her
'María will kill her'

(7j) (Ate) ra ka enne?yu bi (inté?, e, ã)
says Pl man him/her (me, him/her, him/her)
'the men said to him ...'
(Bartholomew 1983:433, and Hernández, p.c.)

(7k) (Ate) be? eða nã (Bartholomew 1983:438)
struck lightning it
'lightning struck it'

(7l) (Glv) rure guna xwan ~~mi~~
there saw John it
'John saw it (animal) there'

(7m) (Glv) xwan guna ž
John saw him
'John saw him'

(7n) (Xng) xul usaʔn ø
Julia left 3h
'Julia left him/her'

Syntactically dependent pronouns cannot occur following a nonpronominal subject.

(8a) (Ytz) * bseb bia n? =bo?
frightened animal that 3f
'the animal frightened him/her'

(8b) (Ist) * biʔya ale =lu
saw Alex 2s
'Alex saw you'

(8c) (Ytz) * g^{w}dao beko? na'nə? =a?
ate dog that 1s
'that dog bit me'

(8d) (Ylg) * baya? bezen =en
sewed fox 3i
'the fox resewed it'

(8e) (Ist) * bi'ya xwan =be
saw John 3h
'John saw him/her'

(8f) (Tex) * kut li =r
will.kill María 2s
'Mary will kill you'

(8g) (Glv) * xwan guna =t
John saw 2p
'John saw you (pl.)'

In some Zapotec languages, a syntactically independent pronoun (whether prosodically independent or not) must be used after the question pronoun 'who', while in others this context requires a prosodically independent pronoun. In the former type of language, which includes Atepec and Xanaguía, these facts provide evidence for having syntactic independence be a parameter which includes pronouns that may or may not be prosodically independent.

(9a) (Xng) ču ?ll
who you
'who are you?'

(9b) (Ate) nuni inté'
who I
'who am I?'

(9c) (Ate) nuni e (bi)
who s/he s/he
'who is s/he?'

(9d) (Tex) k^{y}u rú
who you
'who are you?'

(9e) (Glv) tu liú'
who you
'who are you?'

(9f) (Ist) tu lí' (Pickett 1960:86)
who you
'who are you?' or 'who's there?'

(10a) (Ate) * nuni =a?
who 1s
'who am I?'

(10b) (Glv) * tu b
who s/he
'who is s/he?'

(10c) (Tex) * k^{y}u yu
who he
'who is he?'

4 Syntactically dependent pronouns

4.1 Markedness

Syntactically dependent pronouns appear to be the 'unmarked' pronoun type in Zapotec; in the absence of some constraint against their use in a particular position, syntactically dependent pronouns are used in lieu of syntactically independent pronouns. In some languages the use of an independent pronoun where not required results in strong rejection by native speakers; in others, the sentence is grammatical but not typical (Butler 1976:331-2).

Although some of the literature on Zapotec refers to pronominal affixes (e.g. Briggs 1961, Robinson 1963), we follow Pickett 1960 in viewing the syntactically dependent pronominal morphemes as a special class of pronouns which is *not* inflection. For the most part, pronouns and noun phrases which are coreferential are mutually exclusive in Zapotec. Only one is used in subject position, for example, although one may appear preverbally in 'focus' position, and another postverbally in subject position. The most affix-looking pronouns, the syntactically dependent, are not limited to any one category of word for their host in any Zapotec language. And, as I show below, they are not necessarily absolutely contiguous to the head of the phrase. Thus, there are parallels between the syntax of the syntactically dependent pronouns of Zapotec and the subject (clitic) pronouns of French, since the latter are also extremely restricted in where they may occur.[6]

4.2 Adjacency to projection of head

A major constraint on the occurrence of syntactically dependent pronouns is the following:

(11) Syntactically dependent pronouns must follow a projection of the head.

The relevant notion of head is a relatively uncontroversial one. The head of the clause is the verb (at least extensionally); of the noun phrase, the noun; of the prepositional phrase, the preposition.

In the following examples, the syntactically dependent pronoun immediately follows the head.

Subject

(11a) (Ytz)
bšeb =bo? náda?
frightened 3f me
's/he frightened me'

(11b) (Ist)
bi'ya =lu ni
saw 2s it
'you saw it'

(11c) (Ist)
bi'ya =be lí' (Pickett 1960:61)
saw 3h you
's/he saw you'

(11d) (Glv)
rjap =ni
have 1p
'we have'

(11e) (Tex)
gul bri =r
when arrived 2s
'when did you arrive?'

Possessor

(12a) (Ytz)
šXeid =a? (Butler 1980:193)
hen.of 1s
'my hen'

(12b) (Ist)
spere? < (spere =a?)
hen.of/1s
'my hen'

(12c) (Ist)
ike =be (Pickett 1960:37)
head 3h
'his/her head'

(12d) (Glv)
špiti'z ni (Jones and Church 1985:11)
nest it
'its nest'

(12e) (Tex)
to' =r
head 2s
'your head'

Object of Preposition

(13a) (Tex)
ni =r
of 2s
'to/of you'

(13b) (Tex) nẽ (< ni =ã)
of/1s
'to/of me'

(13c) (Ytz) če =bo? (Butler 1980:190)
of 3f
'of him/her'

Because of constraint (9), syntactically dependent pronouns cannot occur following a nonpronominal subject, as shown in (8) above; they would not be adjacent to a projection of the head.

The syntactically dependent pronoun is not necessarily *directly adjacent* to the head, for which reason constraint (9) refers to a *projection* of the head.[7] For example, the pronoun may be separated from the verb root by an adverbial element (written here as a separate word, although its status may be unclear in some cases), as in the following examples.

(14a) (Ytz) jzoX ša?o =bo' =n (Butler 1980:165)
writes well 3f 3i
's/he is writing it well'

(14b) (Ytz) josya' di?a =bo? (Butler 1980:165)
shouts loudly 3f
's/he is shouting loudly'

(14c) (Ate) bidzina? tega'ba =tu?
arrived just.now 1pe
'we just now arrived'

(14d) (Tex) a rik^{y} ru? =r ri'ñ
Quest do still 2s work
'are you still working?'

(14e) (Tex) brik le'w la =r
gave freely Emph 2s
'you gave freely'

(14f) (Xng) iže guš k^{w}a' šo me'ɬ
tomorrow will.prepare again s/he taco
's/he will make tacos again tomorrow'

Another construction in which the pronoun is separated from the head, but not a projection of the head, is when an adjective phrase intervenes between the head noun and the possessor.[8]

(15a) (Ist) špi?ku ro? =be
dog.of big 3h
'his/her big dog'

(15b) (Ist) ka špi?ku wi'ni =be ke (Pickett 1960:36)
Pl dog.of little 3h that
'those little dogs of his/hers'

(15c) (Glv) šiku biči =nu
dog.of little 2s
'your little dog'

But the constraint on adjacency has two versions in Zapotec, a strict version and a lax version. In some languages, certain syntactically dependent pronouns (in an object of verb position) may be separated from the projection of the head by a *syntactically dependent pronoun*. In other languages, such separation is not at all possible.

(16)

(Strict version) A syntactically dependent pronoun must directly follow a projection of the head.

(Lax version) A *nonthird* person syntactically dependent pronoun must directly follow a projection of the head; third person syntactically dependent pronouns may be separated from the head by other syntactically dependent pronouns.

Languages such as Isthmus Zapotec follow the strict version. Therefore syntactically dependent pronouns are disallowed completely in object of verb position, although a syntactically independent and prosodically dependent pronoun such as ni 'it' is fine there.

(16a) (Ist) * bi'ya =be =lu
saw 3h 2s
's/he saw you'

(16b) (Ist) * bi'ya =lu =be
saw 2s 3h
'you saw him/her'

(16c) (Ist) bi'ya =lu ni
saw 2s it
'you saw it'

Languages such as Yatzachi and Yalalag Zapotec follow the lax version. Therefore syntactically dependent third person pronouns are permitted (and hence preferred) in an object of verb position if preceded by a syntactically dependent pronoun.[9]

(17a) (Ytz) ble?i =da' =bo?
saw 1s 3f
'I saw him/her'

(17b) (Ytz) bšeb =a' =bo? (Butler 1980:171)
frightened 1s 3f
'I frightened him/her'

(17c) (Ytz) bnežX^{W} =e' =bo' =b (Butler 1980:173)
gave 3r 3f 3a
's/he gave it to him/her'

For other languages, the distinction between the lax version and the strict version is irrelevant (due to a lack of syntactically dependent third person pronouns).

(18a) (Tex) * ka =r =ă
love 2s 1s
'you love me'

(18b) (Tex) ka =r yu
love 2s him
'you love him'

There are a variety of constructions where the subject NP is missing, such as questions and relative clauses. The gap (or trace, in transformational terms) in these constructions acts like a syntactically *dependent* pronoun in some Zapotec languages and like a syntactically *independent* pronoun in others, based on whether syntactically dependent pronouns may or may not occur after it.[10] Yatzachi and Yalalag, two very similar dialects, differ in this respect, with Yatzachi of the former type and Yalalag of the latter.[11] (The distinction is irrelevant in languages such as Isthmus Zapotec which follow the strict version of adjacency.) Some data which minimally illustrate these facts are given in (19). This is an area of Zapotec which, among others, requires and deserves further investigation, both for descriptive and theoretical reasons.

Questions
(19a) (Ytz) no bg^{W}ia ___ =bo?
who looked.after 3f
'who looked after him/her?'

(19b) (Ylg) * no be' =? ___ =ba?
who gave 3r 3a
'who did s/he give it to?'

Relative Clauses
(19c) (Ytz) no'lə n? [bg^{W}ia ___ =bo?]
woman that looked.after 3f
'the woman who looked after him/her'

(19d) (Ylg) * be?nn na [bazi? ___ =ba?]
person that bought 3a
'that person who bought it (animal)'

Fronted Nominal

(19e) (Ylg)

* čonn =e? g^{W}yep ___ =en
three 3r climbed 3i
'three of them climbed it'

Equi in Purpose clause

(19f) (Ytz)

jeX =e? g^{W}azX ___ =bo?
goes 3r to.bathe 3f
's/he is going (there) to bathe him/her'

(19g) (Ytz)

sa' goye ___ =b
will.go.1s to.tend 3a
'I am going (there) to tend it'

Appendix: Pronoun Inventories

Pronouns are classified as syntactically dependent (-S) or syntactically independent (+S). The latter are further divided into prosodically dependent (-P) and prosodically independent (+P) pronouns.

Isthmus Zapotec*			
	-S	+S	
		-P	+P
1s	=a'		ná'
2s	=lu		lí'
1pi	=nu		
1pe	=du		
2p	=tu		
3h	=be		
3h	=ø		
3ch	=ni?		
3a	=me		
3i		ni	

Yatzachi el Bajo Zapotec			
	-S	+S	
		-P	+P
1s	=(d)a?		náda?
2s	=(d)o?		ló?
1pi	=jo		jió'
1pe	=to?		néto?
2p	=le		ló'
3r	=e?		
3f	=bo?		
3a	=b		
3i	=n		

* The parenthesized consonants occur only with certain verbs.

Yalagag Zapotec			
	-S	+S	
		-P	+P
1s	=(l)a?		náda?
2s	=lo?		lóe
1pi	=jo		jió'
1pe	=to?		néto'
2p	=le		lé'
3r	=(l)e?		
3f	=be?		
3a	=ba?		
3i	=n		

* The parenthesized consonants occur only with certain verbs.

Texmelucan Zapotec*			
	-S	+S	
		-P	+P
1s	=ã		yá
2s	=r(u)		rú
1pi		n(a)	
1pe	(de (plural) plus 1s)		
2p	(de (plural) plus 2s)		
3r		m(i)	
3m** (male speech)		y(u)	
3a		ma	
3c***		ñ(i)	

* The parenthesized vowel shown with certain pronouns is present if the pronoun follows a consonant; it is absent otherwise.

** Third person respect pronoun has the following usages in Texmelucan: third person female respect (male speech), third person respect (female speech), third person deity (male and female speech).

*** Third person "common" pronoun has the following usages in Texmelucan: third person familiar (female speech), third person familiar female (male speech), third person inanimate (male and female speech).

Atepec Zapotec			
	-S	+S	
		-P	+P
1s	=a?		inté?
2s			lú?
1pi			rí?u
1pe	=tu?		intú?
2p	=le		lebí'
3r		(n)e	
3f		bi	
3c*		(n)ã	

* The third person "common" pronoun in Atepec Zapotec is used for animals, things, and people.

** The parenthesized consonants occur when these pronouns follow 3r and 3c pronouns.

Guelavía Zapotec			
	-S	+S	
		-P	+P
1s	=(n)a?		ná?
2s	=(n)u?		liú?
1p	=n(ɨ)		dúnnɨ
2p	=t(ɨ)		
3r		ñ	
3f		b(ɨ)	
3m (male speech)		ʒ(ɨ)	
3ch		by	
3a		m(ɨ)	
3i		ni	

* The parenthesized vowels occur when these pronouns follow consonant-final words.

Xanaguía Zapotec		
-S	+S	
	-P	+P
1s	ʔnn	náˀ
2s	ʔll, aˀ*	lúˀy
1pi	n	nó
1pe		nóˀ
2p		tó
3r	š(o)	
3h	ø	
3ind	ma	
3a	ma	
3i	o	

* Of the two forms for second person singular, the first follows vowels, the second follows consonants. Use of a 'glottalized' -P pronoun is blocked by the presence of a 'glottalized' (non-root) morpheme (e.g. another glottalized pronoun or a glottalized affix).

NOTES

[1] For information regarding pluralization of third person pronouns, see Marlett and Pickett (1985).

An attempt has been made to standardize transcriptions of Zapotec data included here, regardless of their source. Double n (nn) and *l* (ll) represent 'fortis' sonorants; *b*, *d*, *g*, *ð*, *z*, etc. represent 'lenis' obstruents, but the phonetics of these consonants varies from language to language. The vowels in some Zapotec languages occur with a three way contrast: plain (V), checked (Vʔ), and laryngealized (Vˀ). I thank the following people for discussing these matters with me and for supplying the additional data necessary for this study: Charles Speck, Velma Pickett, Mary Hopkins, Julie Olive, Inez Butler, Joaquín López, Sadot Hernández, Neil and Jane Nellis, María Villalobos, and Catalina Vázquez. I also thank Tom Smith-Stark and his seminar group for their

input during a presentation of this material at the Colegio de México in the fall of 1989, and Steven Lapointe for helpful comments.

The following grammatical abbreviations are used: 1s (first singular), 1p (first plural), 1pi (first plural inclusive), 1pe (first plural exclusive), 2s (second singular), 2p (second plural), 3r (third respect), 3h (third human), 3f (third familiar), 3fe (third feminine), 3m (third masculine), 3ch (third child), 3a (third animal), 3i (third inanimate), 3ind (third indefinite), 3c (third common), Pl (plural), Quest (question).

Language abbreviations include: Ate (San Juan Atepec), Glv (San Juan Guelavía), Ist (Isthmus), Tex (San Lorenzo Texmelucan), Ylg (Yalalag), Ytz (San Baltazar Yatzachi el Bajo), Xng (Santa Catarina Xanaguía).

[2] For example, the idea of (2d) can be expressed as in (i), with the complex construction enclosed within brackets.

(i) [la' =be] ya?
3h Quest
'and her/him?'

I assume that this complex construction is a noun phrase, with la' as the head noun and the pronoun in possessor position. Pickett 1960:25 refers to this construction as an independent pronoun phrase. Texmelucan Zapotec is the only Zapotec language known to us at present that does not have a morpheme cognate with this. The complex construction in Texmelucan consists of the third person pronoun followed by a deictic element, such as yu ze? (he there) 'that one' (male), or the first person plural inclusive person pronoun preceded by the plural morpheme and the stem for 'self': de ub na (Pl self 1pi). Other Zapotec languages have a construction similar to the demonstrative type of construction, at least etymologically, such as Isthmus nga (< ni ka, it there) 'that one' (thing).

[3] There are language-specific and construction-specific conditions on whether a 'copy' pronoun also occurs in post-verbal subject position if there is a fronted NP.

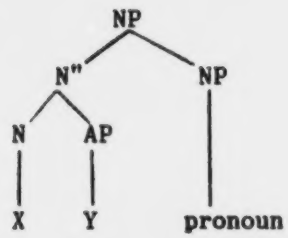
[4] That is, without a phonological host, as described in note 2.

[5] The pronouns that Pickett 1960:24-5 lists as independent pronouns are independent in this sense.

[6] See Sandfeld (1965).

[7] That is, we need to allow for situations such as diagrammed in (i) where the syntactically dependent pronoun is separated from the head of the construction.

(ii)



[8] In some languages, this situation is less simple than might be expected. For example, in Texmelucan and Atepec Zapotec, the word 'of' must precede the possessor if the possessor is separated from the head noun.

(iiia) (Ate) liɟi? lú?
home you
'your home'

(iiib) (Ate) dana to? ki? lú?
sister little of you
'your little sister'

(iiic) (Tex) šimbel^{y} yu
hat he
'his hat'

(iiid) (Tex) šimbel^{y} kas ni y
hat black of he
'his black hat'

[9] There are some restrictions on this, as Butler 1980:179 indicates. Ron Newberg (p.c.) has pointed out similar, and perhaps more severe, restrictions in Yalalag Zapotec.

[10] The subject is also missing in certain imperative constructions in Zapotec. But imperatives are different from questions and relative clauses in that the gap does not block cliticization even in Yalalag.

[11] Other dialects of this area, namely Choapan Zapotec (Larry and Rosemary Lyman, p.c.) and Rincón Zapotec (Robert Earl, p.c.), apparently behave like Yalalag Zapotec.

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LAMINAL SIBILANTS IN CHAMICURO*

Steve Parker

1 Introduction
2 Syllable-initial sibilant phonemes
3 Syllable-final [ǧ]
4 Possible solutions
  4.1 /tˢ/
  4.2 /ši/ coalescence
5 Concluding remarks
Appendix: Additional data

1 Introduction

This paper examines the phonological status of laminal sibilants in Chamicuro. Chamicuro is a Maipuran Arawakan language spoken in the Amazonian lowlands of Eastern Peru. The phonemic inventory of Chamicuro sibilants exhibits a very strong symmetry of three affricates and three corresponding fricatives. However, when the laminal alveolar fricative [ǧ] is considered, the pattern of distribution becomes more complicated. Specifically, it is very difficult to account for the occurrence of syllable-final [ǧ]'s in a simple and elegant way. Two possible solutions are outlined and discussed, and the advantages and disadvantages of each one are evaluated.

2 Syllable-initial sibilant phonemes

The phonemic inventory of Chamicuro sibilants exhibits the following symmetry:

(1)

	alveolar	alveopalatal	retroflexed alveopalatal
voiceless affricates	tˢ	č	ç
voiceless fricatives	s	š	ş

In syllable-initial position, any of the three affricates can occur before any of the five vowel phonemes of Chamicuro (/i e a o u/). Thus the following phonetic sequences can arise:

(2) t^si t^se t^sa t^so t^su

čі če ča čoču

čі če ča čo ču

On the other hand, the phonetic distribution of the sibilant fricatives is, in general, much more limited than that of the affricates. The phoneme /s/ can occur in syllable-initial position before any of the five vowels; thus

(3) si se sa so su

are all well-formed syllables attested in Chamicuro. The two alveopalatal fricatives, nevertheless, exhibit a more limited distribution: phonetically, [š] occurs only before the vowel /a/, and never before any of the other vowels:

(4) (*ši) (*še) ša (*šo) (*šu).

The retroflexed [ʂ] occurs only before back vowels and never before front vowels:

(5) (*ʂi) (*ʂe) ʂa ʂo ʂu.

At first glance it might appear that [š] and [ʂ] could be allophones of the same phoneme, especially due to the very limited distribution of [š]. However, when all of the relevant factors are considered, it becomes clear that [š] and [ʂ] belong to distinct phonemes. First of all, there is abundant evidence that these two segments contrast before the vowel /a/. Consider, for example, the following data[1]:

(6)>	#ša...			#ʂa...	
a.	[šaçúɬlo]	'young'	d.	[ʂaʎóta]	'macaw'
b.	[šána]	'in, on, at, to'	e.	[ʂáma]	'skin'
			f.	[ʂaWkódlo]	'thick'
c.	[šawalásko]	'midnight'			

(7)>	...Vša...			...Vʂa...	
a.	[išakatiskádle]	'abandoned'	d.	[iʂakatuʔkudlúʔto]	'toy'
b.	[mašána]	'he,him'	e.	[kaʂáma]	'mushroom'
c.	[mašapulísta]	'first'	f.	[matóʂa]	'rodent sp.'

Furthermore, when additional data are considered, it becomes evident that the phoneme /š/ does occur before front vowels, although in this position the underlying /š/ is modified phonetically and surfaces as one of two varieties of the laminal alveolar fricative [s̆]:

(8)›	/#ši.../		/#še.../	
a.	[s̆íhpa]	'hand'	d. [s̆ʸé?s̆o]	'fish sp.'
b.	[s̆iléti]	'rat'	e. [s̆ʸénu]	'hair'
c.	[s̆ikečpádlo]	'witch'		

(9)›	/...Vši.../		/...Vše.../	
a.	[e:s̆íli]	'fish sp.'	d. [ames̆ʸéta]	'knife'
b.	[mas̆ilikéli]	'anteater'	e. [kas̆ʸelísple]	'snake sp.'
c.	[mu:s̆íhki]	'peanut'	f. [wus̆ʸelé?ti]	'I die'

These words just presented in (8) and (9) illustrate the occurrence of the laminal alveolar fricative [s̆] and its palatalized variant [s̆ʸ]. Both of these sounds are similar to the apical alveolar fricative [s], except that the laminals are pronounced using the tongue blade rather than the tongue tip. The laminal fricatives [s̆] and [s̆ʸ] contrast with the apical fricative [s] since [s] can also occur before the front vowels /i/ and /e/ (see diagram (3)). Thus, [s̆] and [s̆ʸ] cannot be allophones of the phoneme /s/.

It should be clear, however, that the laminal alveolar fricatives can be analyzed as fronted allophones of the phoneme /š/, since all three of these sounds are in complementary distribution: [s̆] occurs always and only before /i/; [s̆ʸ] occurs always and only before /e/; and [š] occurs always and only before /a/. Thus it seems logical to posit that the phoneme /š/ is fronted and realized as a laminal alveolar fricative before front vowels.

Before this analysis can be firmly accepted, however, one other possibility should also be considered. Recall that the retroflexed alveopalatal fricative /s̱/ also exhibits a limited distribution: it occurs only before back vowels and never before front vowels. Thus the alveolar fricatives [s̆] and [s̆ʸ] are in complementary distribution not only with [š], but also with [s̱]. Therefore, it must be asked whether the laminal alveolars might be allophones of the phoneme /s̱/ rather than of the phoneme /š/.

When all of the relevant facts are taken into consideration, however, it becomes clear that it is indeed correct to derive the laminal alveolar allophones from the phoneme /š/ rather than from the retroflexed /s̱/. First, the laminal alveolars are more similar

phonetically to [š] than they are to [ş]. The latter is articulated farther back in the mouth than the non-retroflexed [š] is. Thus, on the basis of phonetic similarity, /š/ should be favored over /ş/ as the underlying representation of [š̲] and [š̲ʸ]. Secondly, the representation of [š̲] and [š̲ʸ] as allophones of /š/ rather than of /ş/ seems to be more psychologically real to the native Chamicuro speakers with whom I have worked. When I pronounce words containing [š̲] and [š̲ʸ] with [š] in place of the laminal alveolars, they are judged to be acceptable pronunciations by the Chamicuro speakers. However, when I substitute [ş] in place of the laminal alveolars in those same words, they are clearly rejected as being incorrect pronunciations. Finally, the phonological distribution of the proposed alveopalatal phonemes is much more natural when /š/ is posited as the underlying representation of the laminal alveolar fricatives. In that case, the phoneme /š/ occurs before the three non-round vowels /i/, /e/, and /a/, whereas the retroflexed /ş/ also occurs before three vowels: the [+back] /a/, /o/, and /u/. On the other hand, if /ş/ were posited as underlying the laminal alveolars [š̲] and [š̲ʸ], then the phonemic distribution of the alveopalatal fricatives would be very skewed and unnatural: /ş/ would then occur before all five vowels, while /š/ would occur only before /a/. Analyzing /š/ as the underlying form of [š̲] and [š̲ʸ] therefore leads to a much more natural and credible situation in which /š/ and /ş/ each occurs before three different vowels. Thus, all of the phonological evidence consistently favors /š/ over /ş/ as being the underlying representation of the laminal alveolar fricatives [š̲] and [š̲ʸ].

Having arrived at this conclusion, I will now summarize in chart form the phonetic distribution of the three fricative phonemes I have posited in syllable-initial position:

(10)

	i	e	a	o	u
/s/	si	se	sa	so	su
/š/	š̲i	š̲ʸe	š̲a	X	X
/ş/	X	X	ş̲a	ş̲o	ş̲u

3 Syllable-final [š̲]

Up to this point in the discussion, the analysis has been fairly straightforward. However, when the laminal alveolar fricative [š̲] is analyzed in terms of its appearance in syllable-final position, the picture becomes much more complex. The reason is that in this position,

there appears to be a four-way contrast between [s], [s̯], [š], and [š̯]. Observe, for example, the contrast in the following forms in the environment [a__k]:

(11)›	for [s̯]:	[ká**s̯**ki]	'head'
		[á**s̯**kos]	'Let's...!'
	for [š]:	[aškodlóli]	'arrow'
	for [š̯]:	[ma**š̯**kóhpe]	'beach, sand'
		[ula**š̯**ki]	'I throw out'
		[wa**š̯**kadlá?ti]	'I kill'
	for [s]:	[anaskahnéye]	'something'
		[askódli]	'heron'
		[šawalásko]	'midnight'
		[uhtačaskí?ta]	'I remember'

Further contrasts can be observed in the following forms in the environment [i__k]:

(12)›	for [s̯]:	[í**s̯**ka]	'then'
		[i**s̯**kána]	'already'
	for [š]:	[**s̯**iliška?tepíči]	'bow'
		[tilíška]	'all'
	for [š̯]:	no examples	
	for [s]:	[išakatiskádle]	'abandoned'
		[itiská?ne]	'alone'
		[upa?líski]	'I send, command'

The forms listed in (11) and (12) above present a problem to the analysis posited in the previous section. Recall that in syllable-initial position, all occurrences of the laminal alveolar fricatives [s̯] and [s̯ʸ] can be analyzed as allophones of /š/. Now, however, in a syllable-final environment, [s̯] and [š] present a strong contrast and apparently cannot be assigned to the same phoneme. In other words, it seems to be the case that we must now recognize not three, but four fricative phonemes among the inventory of underlying

sibilants in Chamicuro. This would mean that the phonemic system of sibilants loses its symmetry and must now include a seventh segment:

(13)

	apical alveolar	laminal alveolar	alveopalatal	retroflexed alveopalatal
voiceless affricates	tˢ		č	ç
voiceless fricatives	s	š̲	š	ş

This distribution of sibilants in Chamicuro is very unnatural in the sense that there are more contrasting fricatives in syllable-final position than there are in syllable-initial position. Normally, the syllable-initial (intervocalic) position is where the greatest number of contrasts would be expected to surface, while one would expect any neutralization to occur in syllable-final position. The reason is that the syllable onset is often intervocalic and therefore more stable, whereas the coda position is often more dynamic in terms of phonological changes and neutralizations, being at the end of the rhythm wave. Note Hooper's comments concerning syllable codas:

> The strong and weak consonantal positions in the syllable are distinguished by the number of contrasts that are possible in the position... Second position and syllable-final position have a much smaller inventory of occurring segments... Some contrasts are actually neutralized in syllable-final position (Hooper 1976:200).

With Chamicuro the situation is reversed: there are three contrasting fricatives in syllable-initial position, but four in syllable-final position. This is a very marked system. Consequently, at least three advantages would be gained if we could predict in some way the occurrence of [š̲] in syllable-final position: (a) it would lower the inventory of sibilant phonemes from seven to six; (b) it would restore the symmetry in the sibilant system which is lost when seven phonemes are posited; and (c) it would make the pattern of distribution of the fricative phonemes much more natural and unmarked with respect to the number of contrasting segments in onset vis-a-vis coda position.

4 Possible solutions

I have just shown that it would be advantageous to predict the occurrence of all syllable-final [š̲]'s so as to be able to conclude that [š̲] is not a contrastive phoneme in Chamicuro. Let us examine and evaluate two possible solutions.

4.1 /tˢ/

The first possibility would be to claim that whenever [ǧ] occurs in a syllable-final position, it is an allophone of /tˢ/. There are two factors relating to the distribution of [ǧ] and [tˢ] which suggest this as a possible analysis. In the first place, the phone [tˢ] never occurs in syllable-final position. Therefore, the two phones [ǧ] and [tˢ] are in complementary distribution with respect to syllable-final position in Chamicuro.

Secondly, another factor which motivates the possibility of analyzing syllable-final [ǧ]'s as allophones of /tˢ/ is the fact that in many cases, the Chamicuro speakers optionally pronounce some of these [ǧ]'s as laminal alveolar affricates, i.e., [tˢ]. In other words, there appears to be free variation between [ǧ] and [tˢ] in words such as [káǧki] ~ [kátˢki] 'head,' [óǧlo] ~ [ótˢlo] 'species of pig,' [píǧlo] ~ [pítˢlo] 'hummingbird,' [ipíǧle] ~ [ipítˢle] 'its wing,' etc. This is another piece of evidence which would support an analysis by which all occurrences of syllable-final [ǧ] are derived from an underlying /tˢ/.

Nevertheless, the question remains of whether this solution is the correct one. Although this analysis is phonologically plausible and does account for all the available data, it does not appear to be the best solution. Positing /tˢ/ as the underlying representation of syllable-final [ǧ]'s does not seem to be psychologically real to the Chamicuro speakers. When I pronounce words such as [káǧki] 'head' with [tˢ] rather than [ǧ] (i.e., [kátˢki]), the native speakers immediately and consistently reject them. They respond much more favorably when those same words are pronounced with [š] rather than [tˢ]. For example, [káški] is accepted as a correct alternate pronunciation of [káǧki]. This suggests that all occurrences of [ǧ], both syllable-initially and syllable-finally, should be derived from an underlying /š/. Such a solution is more consistent with other details of the analysis and is more in line with the Chamicuro speakers' intuitions about their own language. Therefore, let us lay aside the /tˢ/ analysis and consider as a second possibility a more interesting and plausible solution.

4.2 /ši/ coalescence

Another possible solution to the problem of syllable-final [ǧ]'s involves positing an underlying sequence /ši/ which coalesces to form [ǧ]. This solution is somewhat abstract since, as a general rule, there is no direct phonetic evidence of an underlying /i/ following the sibilant in question. According to this analysis, a word such as [káǧki] 'head,' for example, would be derived from the underlying form /kašiki/ in the following way: first the underlying /š/ would be fronted and become [ǧ] in accordance with the fronting rule discussed earlier. Then the post-sibilant /i/, which triggered the š fronting, would be deleted by a syncope-type rule which will be discussed later in this section. Since this solution is abstract, it needs to be strongly justified with concrete evidence. Let us consider several facts

relating to this analysis which confirm the possibility of a coalescence solution.

In the first place, there is good phonological motivation for deriving syllable-final [ǧ]'s from an underlying /š/ since, as has been shown, all syllable-initial occurrences of [ǧ] are allophones of /š/ as well. Since there is independent motivation for the š fronting rule, it would be cost-free to the grammar to allow this rule to handle the surface occurrences of syllable-final [ǧ] as well.

Secondly, synchronic Chamicuro morphology appears to exhibit remnants of a historical syncope process by which the vowel /i/ is elided following the phoneme /š/ in a limited number of words. Consider, for example, the word [náǧi] 'corn.' Phonemically, this word should be analyzed as /naši/ due to patterns of complementary distribution, as discussed earlier. When certain types of nouns in Chamicuro are possessed, they require one of several possessive suffixes as well as a personal prefix which agrees with the person and number of the possessor. Thus 'my corn' would be composed morphologically of the first person singular possessive prefix /u-/, followed by the noun root /naši/, followed by the possessive suffix /-ne/: /u-naši-ne/. However, in actuality this word is pronounced as [unáǧne], that is, for some reason the underlying /i/ has been deleted, after the preceding /š/ has been fronted to [ǧ]. Likewise, [míǧi] 'cat,' when possessed, becomes [u-míš-ne] or [u-miǧí-ne] 'my cat.' Both of these pronunciations are attested. However, the deletion of the post-sibilant /i/ is not a regular morphophonemic process which operates consistently in Chamicuro; it appears to be limited to a handful of words analogous to /u-miši-ne/. The freely alternating forms [umíšne] and [umiǧíne] 'my cat' provide support for the analysis by which syllable-initial [ǧ]'s are derived from an underlying /š/, since in at least one of the attested pronunciations the sibilant surfaces as [š]. In addition, the two possessed forms [unáǧne] 'my corn' and [umíšne] 'my cat' hint at the prior existence of a historical syncope process by which underlying /i/'s were elided in certain morphophonemic environments following the phoneme /š/.

Thirdly, various aspects of the behavior of one particular noun root also tend to confirm an abstract /ši/ ⟶ [ǧ] coalescence solution. In Chamicuro the word for 'fingernail' or 'claw' is pronounced [ǧtó]. Although in this case the [ǧ] is obviously syllable-initial rather than syllable-final, for all practical intents and purposes it patterns exactly the same as any other [ǧ] which occurs preceding a consonant in surface forms. One thing which is curious about the word [ǧtó] is that it is the only monosyllabic noun root discovered to date in the entire language. That is, of the 444 nouns which have been analyzed up to this point, every single one except [ǧtó] is built from a root having at least two phonetic syllables. [ǧtó] 'fingernail' is the only exceptional one which, on the surface at least, is composed of only one syllable. This should make us suspect that underlyingly it does contain two syllables. Thus, by positing an abstract underlying form such as

/šito/, we could make this root consistent with all the other noun roots in the language insofar as the number of syllables is concerned.

In addition, on one occasion one of the Chamicuro speakers actually pronounced this word as [ǧi̯tó], that is, with a weak, transitional [i̯] following the [ǧ]. The [i̯] which I heard in this word was definitely not palatalization, nor did I perceive it as a lengthening of the [ǧ] or as a syllabic [ǧ]. Rather, it was clearly vocalic in nature, although it may have been voiceless, and was undoubtedly not a regular, full [i]. This fact also confirms that, at least in some cases, [ǧ]'s which are followed by a consonant in their phonetic forms are actually followed by an /i/ in their underlying forms.

Finally, one other incident relating to the word [ǧtó] 'fingernail' also confirms the /ši/ coalescence solution at which we have been aiming. One of the two Chamicuro speakers with whom I have worked is literate in Spanish. At one point in our study of the language, but before I had done any phonological analysis, I asked him to write down some of the Chamicuro words for me, using Spanish orthography as well as he could. I instructed him to write an underlined *s* (*s*) whenever he heard the sound [ǧ]. When we got to the word for 'fingernail' ([ǧtó]), he wrote it as *gito*!

In similar fashion, on another occasion the one literate Chamicuro speaker also wrote in an *i* in the analogous word [aǧkósi] 'Let's...!,' spelling it as *ashicosi*. This again supports the conclusion that, at least for this one word, an [ǧ] which is phonetically syllable-final should be derived from the underlying sequence /ši/.

Finally, there is one other line of evidence which also serves to confirm an abstract coalescence solution. Observe in (14) below a comparative list of cognate words from nine different Maipuran Arawakan languages for the form meaning 'claw' or 'fingernail.'

(14)

Proto Maipuran	*s	eu	t	a	
Amuesha	-š	e:	č		(ehp)
Chamicuro	š		t	o	
Piro	s	ewa	t	a	
Apurina	-s	oo	t	a	
Machiguenga	š	a	t	a-	
Asheninca	sy	e	t	a-	
Resigaro	-h	i?	t	á	[ví]
Curripaco	-t^{s}	o	t	a	
Yavitero	t^{s}	ú	l	a	[wi]

(Payne, forthcoming).

It is interesting to note that the Chamicuro form [što] is the only one which lacks a vowel in the first syllable, after the initial sibilant (or /h/). This fact suggests that at some point in its

development Chamicuro did have a vowel in the initial syllable of this word.

All of the facts mentioned above constitute tantalizing evidence for positing an abstract underlying /i/ which coalesces with a preceding /š/ to yield an alveolar [ǧ]. Phonetically, this [ǧ] then ends up being in a coda position. This solution has much more confirmatory evidence in its favor than does the /tˢ/ solution outlined in the previous section. First, by deriving syllable-final [ǧ]'s from an underlying /š/, we can deal with all of them by means of the same rule which accounts for syllable-initial [ǧ]'s as well. Secondly, there are morphophonemic remnants of a historical syncope process which accounts for the elision of certain /i/'s after the segment /š/. Additionally, orthographic peculiarities written by one of the Chamicuro speakers constitute psycholinguistic evidence arguing for the existence of an underlying /i/ in the words [ǧtó] 'fingernail' and [aǧkósi] 'Let's...!' Finally, when Chamicuro is compared with other Arawakan languages, it stands out as the only one in which the word for 'fingernail' has only one syllable.

All of the relevant phonological facts discussed up to this point seem to point in the direction of an abstract /ši/ coalescence solution. However, a further problem now presents itself: if all syllable-final [ǧ]'s are to be derived from the underlying sequence /ši/, under what conditions does this /i/ delete? We must account for the elision of the relevant /i/'s in some rule-governed way if we are going to posit a coalescence solution. In other words, certain words containing an underlying sequence /ši/ surface phonetically with the sequence [ǧi], e.g., [kiǧíli] 'mouse.' In these cases, the alveolar [ǧ] is predicted by the š fronting rule. However, what is crucial is that in words such as this one, the underlying /i/ (following the /š/) is *not* deleted. In other cases, words containing an [ǧ] followed by a consonant in their phonetic forms are also derived from underlying forms which contain the sequence /ši/, e.g., /šito/ ⟶ [ǧtó] 'fingernail.' For some reason, the /i/'s which trigger š fronting are elided in some words but not in others. Let us present some relevant data to see what types of patterns emerge.

An inspection of the two words in (15) below shows that the loss or retention of the relevant /i/'s takes place in phonologically analogous environments:

(15)› a. [píǧle] 'wing'

b. [kiǧíli] 'mouse'

The underlying forms posited for these words are as follows:

(16)› a. /pišile/

b. /kišili/

How can we account for the fact that the second /i/ of /pišile/ is elided while the corresponding /i/ of /kišili/ is not? We cannot appeal to the presence or absence of underlying stress since Chamicuro exhibits a very regular pattern of penultimate stress assignment. That is, underlyingly, *all* vowels are unstressed, and the rule of penultimate stress assignment must apply *after* the /i/ deletion or syncope rule, as shown by the form [píǧle]:

(17) Syncope before Stress Assignment

	/kišili/	/pišile/
š Fronting	kiǧili	piǧile
Syncope	----	piǧle
Stress Assignment	kiǧíli	píǧle
	[kiǧíli]	[píǧle]

If, on the other hand, penultimate stress assignment were to apply before the syncope rule, then the second /i/ of /pišile/ would become stressed and would therefore not undergo syncope:

(18) Stress Assignment before Syncope

	/kišili/	/pišile/
š Fronting	kiǧili	piǧile
Stress Assignment	kiǧíli	piǧíle
Syncope	----	----
	[kiǧíli]	*[piǧíle]

Therefore, since the placement of stress in Chamicuro is rule-governed, we cannot appeal to underlying stress in order to distinguish those /i/'s which delete from those which do not.

Consider also the following pair of derivations:

(19)> a. /wešitihki/ > [weǧtíhki] 'I tie up'

b. /mašilikeli/ > [maǧilikéli] 'anteater'

Once again, the problem arises of how to account for the loss of the first /i/ of /wešitihki/ without also deleting the corresponding first /i/ of /mašilikeli/.

A careful study of these and other analogous forms reveals that there simply does not seem to be any pattern to the /i/ elision rule. This does not mean, however, that the /ši/ coalescence solution must ultimately be rejected. As we have seen, this solution accounts for so many phenomena in such an intuitive way, and it has quite a bit of

confirmatory evidence in its favor. The problem is that there is no way to predict /i/ deletion in a consistent and rule-governed fashion. I suspect that the phenomenon of /ši/ coalescence in Chamicuro is an example of an incoming rule which is still in a transitional stage of acceptance into the language and is therefore currently in flux. I would predict that, given enough time, the pattern of its application would become more regular and obvious.

5 Concluding remarks

What do we do then with syllable-final [š̆]'s? One possibility is to recognize the phonetic contrast between [š̆] and [š] in the coda position and conclude that Chamicuro has a fourth fricative phoneme, /š̆/. However, as was stated earlier, I hesitate to go to that extreme. The inventory of sibilant phonemes seems to be so complete and symmetrical when it is limited to six. Also, all the evidence I can bring to bear on the issue points to the conclusion that the Chamicuro speakers react to all alveolar [š̆]'s as though they were phonemically an /š/. Thus I would posit that all [š̆]'s should be derived either from an underlying /š/ or from the abstract sequence /ši/. In other words, the underlying form of, for example, [kiš̆íli] 'mouse' would be /kišili/; that of [píš̆lo] 'hummingbird' would be /pišilo/, with an abstract /i/; and that of [tilíška] 'all' would obviously be /tiliška/.

Theoretically speaking, the deletion of certain underlying /i/'s after the fronted [š̆] is an unusual and interesting phenomenon since it entails the claim that a relatively abstract rule (syncope) applies *after* a low-level allophonic rule (š fronting). The latter rule undoubtedly applies in the postlexical component of the grammar, yet it is necessarily ordered before the *i* deletion rule, which in many respects behaves like a lexical rule.

As far as practical matters are concerned, it seems to work well in the orthography we have developed to represent all [š̆]'s, as well as all [š]'s, with the same digraph, *sh*, and to leave out the abstract /i/ when it does not show up in the phonetic form. Thus, [kiš̆íli] is represented as *kishili*, [píš̆lo] is written *pishlo*, and [tilíška] is of course *tilishka*. Since no minimal pairs have been discovered which contrast [š̆] and [š] in a syllable-final position, the Chamicuros seem to get the right pronunciation of all *sh*'s every time, without confusion. And that, after all, is the ultimate purpose of an orthography.

APPENDIX: ADDITIONAL DATA

The following forms further illustrate the phonological patterns exemplified throughout the discussion. I list these data here for those who may have interest in pursuing the analysis in more depth. The number in parentheses before each group of forms corresponds to the appropriate numbered example presented earlier in the discussion.

(6)	#ša...			#ṣa...	
	a.	[šáki]	'vagina'	e. [ṣamleʔçóma]	'coward'
	b.	[šáni]	'wasp'	f. [ṣáʔme]	'shade'
	c.	[šašáka]	'old'		
	d.	[šakíʔsu]	'tick (n.)'		
(7)	...Vša...			...Vṣa...	
	a.	[češána]	'deer'	c. [uluṣána]	'my godfather'
	b.	[šašáka]	'old'	d. [maʔluṣána]	'termite'
				e. [puṣána]	'sister-in-law'
				f. [tíṣa]	'toad'
				g. [kaṣáhpa]	'piranha'
(8)	/#ši.../				
	a.	[ǧɪɬtóki]	'drum'		
	b.	[ǧinitaçomádlo]	'drunkard'		
(9)	/...Vši.../			/...Vše.../	
	a.	[ihtíǧi]	'root'	f. [kamáǧʸe]	'iguana'
	b.	[kahpíǧi]	'rodent sp.'	g. [kaǧʸeleʔtáka]	'dead'
	c.	[náǧi]	'corn'	h. [umaǧʸentatádle]	'I help'
	d.	[usadliǧíni]	'my niece'	i. [poǧʸéwa]	'dry'
	e.	[yíǧi]	'its tail'	j. [kiǧʸemódlo]	'thread'
(11-12)	...VǧC...			...VsC...	
	a.	[kaǧpádlo]	'opossum'	r. [senesyáko]	'day'
	b.	[óǧlo]	'sp. of pig'	s. [časkódlo]	'stick'
	c.	[píǧle]	'wing'	t. [naspéhka]	'piece'
	d.	[píǧlo]	'hummingbird'	u. [itísna]	'hill'

e. [úğto] 'my fingernail'

f. [weğtíhki] 'I tie up'

g. [itotikíğte] 'they came up-river'

...VšC...

h. [či?naštadlíči] 'town'

i. [ašmudle?kódlo] 'wooden club'

...VšC...

j. [čpóška] 'afternoon, late'

k. [ğipotoška?šo?lóči] 'shotgun'

l. [ulawušyáko] 'my hernia'

m. [upamošóški] 'I push'

n. [ušnáke] 'my hammock'

o. [wapuškádle] 'I break'

p. [yaštíhka] 'he/it stops'

q. [yíğna] 'stingray'

v. [kapapeskahpódlo] 'ambitious'

w. [ukasostádle] 'I accept'

x. [čísti] 'bird'

y. [mašapulísta] 'first'

z. [peski?túhka] 'slow'

aa. [pestíklo] 'insect sp.'

bb. [ukasósti] 'I obey'

cc. [upa?pésne] 'I finish'

dd. [kağ^{y}elísple] 'snake sp.'

ee. [mespíhča] 'rope'

ff. [paspatáli] 'raft'

gg. [ustawáli] 'sleeping mat'

hh. [usenústi] 'I perspire'

ii. [túsna] 'back, shoulders'

jj. [uskáWna] 'my father'

kk. [upeski?tádle] 'I prepare'

ll. [peswatádlo] 'fresh, new'

(15, 16, 19)

a. /išika/ > [íška] 'then'

b. /kašiki/ > [kážki] 'head'

c. /kašipalo/ > [kağpádlo] 'opossum'

d. /ošilo/ > [óğlo] 'species of pig'

e. /pišilo/ > [píğlo] 'hummingbird'

f.	/ušito/	>	[úğto]	'my fingernail'
g.	/itotikišite/	>	[itotikíğte]	'they came up-river'
h.	/ašikosi/	>	[ağkósi]	'Let's...!'
i.	/yašitewusketuhkana/	>	[yağtewusketuhkána]	'it shook itself'
j.	/išila/	>	[íğla]	'already'

Compare:

k.	/šihpa/	>	[ğíhpa]	'hand'
l.	/šikečpalo/	>	[ğikečpádlo]	'witch'
m.	/šileti/	>	[ğiléti]	'rat'
n.	/šiltoki/	>	[ğɬtóki]	'drum'
o.	/šinitaçomalo/	>	[ğinitaçomádlo]	'drunkard'
p.	/e:šili/	>	[e:ğíli]	'fish sp.'
q.	/ihtiši/	>	[ihtíği]	'root'
r.	/kahpiši/	>	[kahpíği]	'rodent sp.'
s.	/mu:šihki/	>	[mu:ğíhki]	'peanut'
t.	/naši/	>	[náği]	'corn'
u.	/usališini/	>	[usadliğíni]	'my niece'
v.	/yiši/	>	[yíği]	'its tail'
w.	/ušini/	>	[uğíni]	'my baby'
x.	/šiliška?tepiči/	>	[ğiliška?tepíči]	'bow'
y.	/çomahši/	>	[çomáhği]	'grass'
z.	/ušišulti/	>	[ušišúɬti]	'I pull'

ABBREVIATIONS

sp.	species	n.	noun

NOTES

*For helpful comments on earlier versions of this paper I am indebted to Rick Floyd and John Clifton.

1. For additional data illustrating these same patterns, see the appendix. Henceforth, numbered examples containing data which are supplemented by additional corresponding forms in the appendix will be marked with a > after the number of the example, e.g., (7)>.

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POSSESSOR ASCENSION IN DAKOTA SIOUX

Thomas M. Pinson

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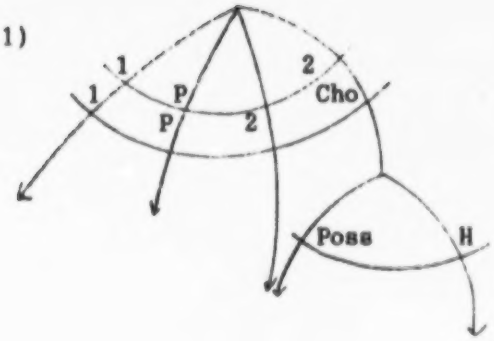
1 Introduction

The goal of this paper is to present evidence for Possessor Ascension in Dakota Sioux[1]. In this construction, a nominal which is semantically a possessor is syntactically not a constituent of the noun phrase, but rather a constituent of the clause. I first discuss the universal characterization of Possessor Ascension from within the framework of Relational Grammar and give an introduction to the ways possession is expressed in Sioux. Next I present four arguments for this construction in Sioux. One is based on verb agreement, the second on reflexivization, the third on the distribution of the possessive morpheme, and the fourth on the morpheme ki-. Then I discuss certain constraints on the construction. The effect of Possessor Ascension on verb agreement is of particular importance since it constitutes a strong argument against a frequently cited form of the verb agreement rule in Sioux, a rule based on semantic notions.

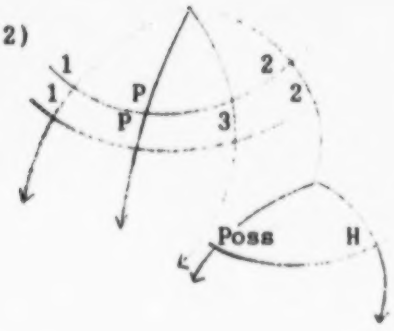
2 Universal characterization of Possessor Ascension

In his article "Relational Grammar," Perlmutter (1980) states that the goal of a linguistic theory is to state how languages differ, and how they are alike. In order to accomplish this goal, Relational Grammar (henceforth RG) provides a universal characterization of constructions that are common to languages. Two types of Possessor Ascension (henceforth PA) have been attested in natural languages. They are represented by the following stratal diagrams:

(1)



(2)



In the first type of PA, as shown in (1), the possessor ascends to take on the grammatical relation of the NP from which it comes (the host). This type of PA has been argued for in Kinyarwanda (Bickford 1986), Kera (Camburn 1984), and Southern Tiwa (Allen, Frantz, Gardner, and Perlmutter to appear). In the second type of PA, shown in (2), the possessor ascends to take on the grammatical relation of indirect object. This type of PA has been argued for in Choctaw (Davies 1986), Tzotzil (Aissen 1987), Kera (Camburn 1984), and Kinyarwanda (Bickford 1986).

What happens to the possessor in the NP after ascension is a language particular phenomenon. In some languages a pronominal copy occurs in the NP. In others, no copy occurs.

The second type of PA (cf. (2)) is anomalous because it violates the Relational Succession Law, which says:

(3) An ascendee assumes the grammatical relation of the host out of which is ascends.

Recently, there has been another analysis called Possessor Union by Rosen (1986) and Gerdts (1989). This analysis removes the anomaly by treating NPs as transitive clauses, thereby allowing the raising of possessor to 3 to be treated like other union constructions in which the downstairs ergative becomes the upstairs 3. It has been attested in many languages that the downstairs ergative may become the upstairs 3, cf. Cole 1983.

3 Possession in Dakota

In this section I discuss the different ways in which Dakota expresses possession. There are three primary ways it accomplishes this: 1) using a relative clause, 2) using morphology on the possessed noun, and 3) using morphology on the verb. The first method, I claim, has been incorrectly analyzed as a possessive pronoun. The second and third methods are related. I will discuss their relationship in section 4.3. In this section I only present the facts of the language.

It has been argued that Sioux has no set of adjectives (Van Valin 1977). Rather, Sioux uses relative clauses to express adjectival meaning in the NP. Consider (4) and (5).

(4) Wicaŝa mani hanska-pi.
man walk tall-pl
'The men who are walking are tall.'
'The walking men are tall.'

(5) Wicaŝa hanska mani-pi.
man tall walk-pl
'The men who are tall are walking.'
'The tall men are walking.'

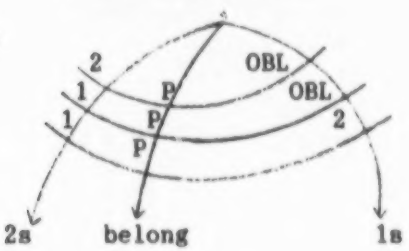
It has been previously claimed (Boas and Deloria 1941, Riggs 1968, and Beuchel 1983) that the morpheme t^hawa is a possessive pronoun. But based on the arguments that there are no adjectives, it follows that t^hawa is a verb, cf. (6).

(6) a. Ŝunka ni-t^hawa wa-kute.
dog 2s-belong 1s-shoot
'I shot your dog.'
'I shot the dog that belongs to you.'

In fact, Williamson (1979) argues that t^hawa is a double patient verb. This is illustrated in (7).

(7) a. Ni-mi-t^hawa.
2s-1s-belong.
'You belong to me.'

b.



The above construction can be used with any possessed object. This has not always been the case and I will discuss this historical change later.

The second method of expressing possession in Dakota is by means of person agreement in the NP. The agreement is affixed to the object being possessed. This construction is used with kinship terms and body

parts but is not used with alienable possessions (i.e. shoes, dogs, etc.), cf. (8) - (10).

(8) Mi-ate kin kon.
1s-father DET old
'My father is old.'

(9) Mi-siha ŝica-mna.
1s-feet bad-smell
'My feet stink.'

(10) *Ni-ŝunka.
2s-dog

Historically, kinship terms could not occur with the verb t^hawa to express possession, but obligatorily had the person agreement prefixed on them (Boas and Deloria 1941:129-31). This is shown in (11). Examples like (12) are becoming more common, however.

(11) Ni-t^hankŝi a-wa-p^ha.
2s-(younger) sister LOC-1s-hit
'I hit your sister.'

(12) T^hankŝi mi-t^hawa a-ya-p^ha.
sister 1s-belong LOC-2s-hit
'You hit my sister.'

The third common construction that is used in Dakota to express possession is person agreement on the verb. It is concerning this construction that RG makes strong claims. For now I call this Possessor Ascension. In section 4, I argue for this analysis, and in section 5, I give the constraints. Consider (13) and (14).

(13) Nape ma-yaza.
hand 1s-hurt
'My hand hurts.'

(14) Hanpa ma-ki-yuŝdoka-pi.
shoe 1s-ADV-remove-pl
'They took my shoes off.'

In both of these clauses, the possessor is not expressed in the NP, rather on the verb with person agreement. I will argue that for both, the possessor ascends from an NP that is an initial 2 to an object term. There are differences in these clauses, though. The possessed object in (13) is inalienable and in (14) alienable. The possessor of inalienable objects ascends to 2. The possessor of alienable objects ascends to 3 and advances to 2, which is registered by the morpheme ki-.

4 Arguments for Possessor Ascension

4.1 Verb agreement

There are two sets of verb agreement affixes in Dakota. These affixes mark agreement in person and number with the subject and object. Table 1 gives the singular affixes.

Table 1

Set I:	wa/bd	1s	Set II:	ma	1s	{maya 1s:2s}
	ya/d	2s		ni	2s	{c^hi 2s:1s}
	0	3s		0	3s	

The bd- and d- affixes of Set I are the allomorphs of wa- and ya-, respectively, for verbs beginning with y. The first affix in the braces of Table 1 is simply ma+ya, and the second is a suppletive allomorph of wa+ni. This is simply portmanteau. The third person marker is null. Therefore the argument I present from verb agreement only considers first and second person singular possessors. Verb agreement is illustrated in (15) and (16).

(15) A-ma-ya-p^ha.[2]
LOC-1s-2s-hit
'You hit me.'

(16) Taku wa-pazo.
something 1s-show
'I showed something.'

It appears from these examples that Set I marks subject agreement and Set II marks direct object agreement. But while Set I affixes occur on some intransitive verbs, Set II affixes occur on other intransitive verbs, as shown in (17) and (18).

(17) Wa-nowan.
1s-swim
'I was swimming.'

(18) M-iŝtima.
1s-sleep
'I was sleeping.'

This kind of syntactic behavior is not unusual. Perlmutter and Postal account for it by positing two types of intransitive strata. The first type contains a 1-arc, but no 2-arc. This type of stratum is called an unergative stratum. (17) is initially unergative. In the second type of intransitive stratum, there is a 2-arc, but no 1-arc. This type of stratum is called an unaccusative stratum. (18) is initially unaccusative. Since all sentences must have a final subject in RG, the initial 2 of (18) must advance to 1. This is called

unaccusative advancement. Thus, rules that refer to grammatical relations at the initial level should treat predicates that determine an intransitive initial stratum differently. The hypothesis that intranstive predicates determine these two types of initial stratum is called the Unaccusative Hypothesis. For discussion of linguistic evidence for the Unaccusative Hypothesis and of the semantic correlates of the two types of intransitive predicates, see Perlmutter 1978 and Rosen 1984.

Plunkett and McKeever (1986) discuss the implications of several constructions, including unaccusative clauses, on verb agreement in Sioux. Then they state the following rule for verb agreement:

(19) a. Working 2s determine Set II agreement markers.
b. Nominals heading a 1-arc determine Set I agreement markers.
Where (a) is disjunctively ordered with respect to (b).

Working 2s are discussed in Perlmutter (1982:314). Informally, a nominal is a working 2 if it is a 2 at some level and not a chomeur finally.

Another formulation of the Sioux verb agreement rule has been given by Van Valin (1977) in the framework of Role and Reference Grammar. He claims that verb agreement can be explained almost completely using semantic notions. His rule may be stated as follows:

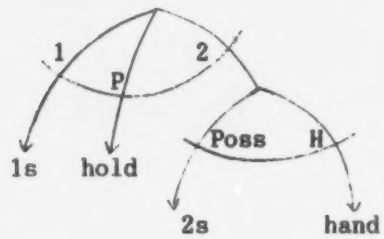
(20) a. Actor, which includes the semantic role of experiencer, takes Set I agreement.
b. Undergoer, which includes the semantic roles experiencer, patient, goal, source and beneficiary, takes Set II agreement.
c. Site, which includes the semantic roles of location, goal and source, takes Set II agreement with location postposition.

He notes that some verbs are exceptional. They do not take the agreement one would expect. He offers an explanation for this exceptionality based on phonological information. However, according to his rule, a nominal which bears the semantic role of possessor should never determine agreement, but rather the head noun which is an 'actor', 'undergoer' or 'site' should determine agreement. Although he could include possessor under one of his three main role types, he could not predict when the possessor would determine agreement and not one of the other semantic roles. Thus, the effect of PA on verb agreement discussed below constitutes an argument against this rule.

Now consider the following two sentences.

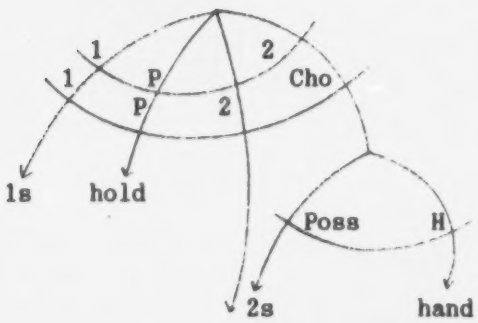
(21) a. Ni-nape o-bd-uspa.
2s-hand LOC-1s-hold
'I'm holding your hand.'

b.



(22) a. Nape o-c^{h}i-uspa.
hand LOC-2s:1s-hold
'I'm holding your hand.'

b.

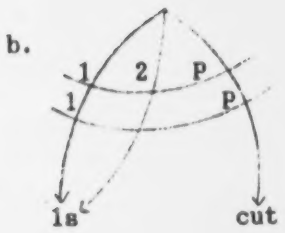


In (21) the verb agrees with the first person singular subject. Since "hand" is third person, no agreement marker occurs. This is what Plunkett and McKeever's rule would predict. In (22a), however, the verb agrees with a first person singular subject and a second person direct object. The PA analysis, (22b), accounts for this since the possessor "you" is a final direct object.

4.2 Reflexivization

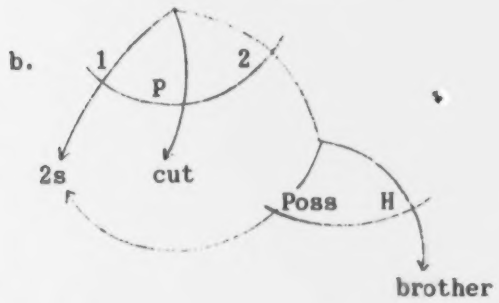
A reflexive morpheme, ic$^{?}$i-, occurs on the verb in Dakota when the final direct object is coreferential with the subject.[3] This is illustrated in (23).

(23) a. Ba-m-ic$^{?}$i-hon.
INS-1s-RFL-slash
'I cut myself.'

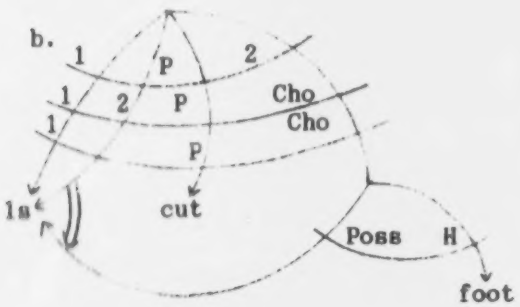


When a subject is coreferential with a possessor, reflexive morphology is absent in some cases (24a), but present in others (25a).

(24) a. Ni-ŝunka ba-ya-hon.
2s-(younger) brother INS-2s-slash
'You cut your brother.'



(25) a. Siha ba-m-icʔi-hon.
foot INS-1s-RFL-slash
'I cut my foot.'



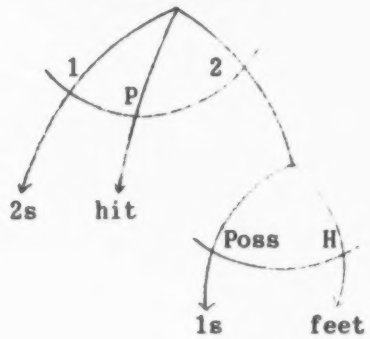
The PA analysis accounts for this difference. The possessor in (24a) is not a direct object at any level, and therefore should not determine reflexive morphology on the verb. The possessor in (25a) bears no initial grammatical relation to the clause, but is a final direct object in the clause. Therefore, it does determine reflexive morphology on the verb. Equi accounts for the lack of a possessive morpheme in the NP.

4.3 Distribution of possessive morpheme

I mentioned in section 3 that one method of expressing possession in Dakota is attaching person agreement to the possessed noun. I also said that this construction is related to PA. These two constructions have similar initial strata, but different final strata. Consider (26) and (27).

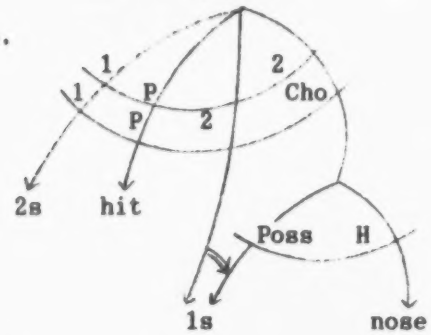
(26) a. Mi-siha a-ya-p^{h}a.
1s-feet LOC-2s-hit
'You hit my feet.'

b.



(27) a. P^{h}asu a-ma-ya-p^{h}a.
nose LOC-1s-2s-hit
'You hit my nose.'

b.



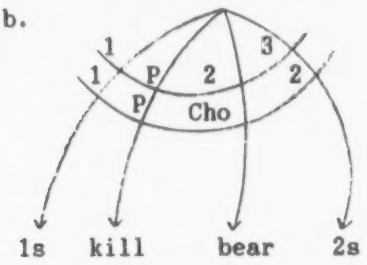
Initially the possessor is in the NP and the body part is the head of the NP that is the direct object. But in the final stratum of (27) the possessor ascends from the NP and becomes a constituent of the clause. Equi accounts for the lack of the possessive morpheme in the NP. Thus, the construction represented in (26) has the same initial stratum that a PA construction has.

4.4 The morpheme ki

Dakota Sioux has a verbal affix, ki-, which has been claimed in the literature to show verbal agreement with the indirect object/benefactive (cf. 28), and also to express possession in the VP, as in (29) (Van Valin 1977:15-16 and Williamson 1984:36-38). This leaves an ambiguity unexplained, cf. (28) and (29). Plunkett and McKeever (1986) argue that Sioux allows 3-2 and BEN-2 advancement, thus it can be claimed that ki- registers this advancement on the verb. This is important since their verb agreement rule, (19), predicts that the verb agrees with a nominal that is initially an indirect object/benefactive or a possessor and finally a direct object.

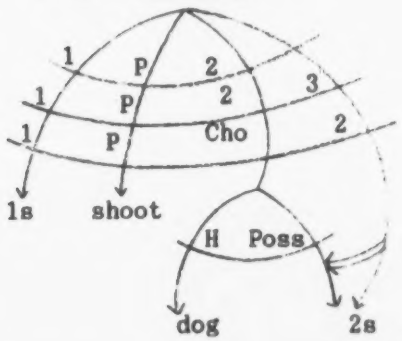
(28) a. Mat^{h}o kin c^{h}i-ci-k$^{?}$te.[4]
bear DEF 2s:1s-ADV-kill
'I killed the bear for you.'

b.



(29) a. Ŝunka c^{h}i-ci-kute.
dog 2s:1s-ADV-shoot
'I shot your dog.'

b.



(28a) can mean 'I killed your bear' and (29a) can mean 'I shot the dog for you.' This ambiguity can be accounted for by comparing the final strata in (28b) and (29b). Namely, the possessor and the beneficiary are both final objects, and the initial objects are final chomeurs.

5 Constraints

5.1 Grammatical relation of the host

Perlmutter and Postal (1974) initially proposed the Host Limitation Law (HLL):

(30) Only nominals bearing a term relation can serve as host of ascensions.

Dakota follows this law by only allowing Possessor Ascension from an initial 2. In (31) it can be seen that the host may be a final 2 of a transitive stratum.

(31) Nape ba-ma-ya-ksa.
hand INS-1s-2s-separate
'You cut off my hand.'

In (32) it can be seen that the host cannot be a final 1 of a transitive clause.

(32) Nape o-ma-ya-yuta.
hand LOC-1s-2s-touch
*'Your hand touched me.'
'You touched my hand.'

Some final 1's of intransitive clauses can host Possessor Ascensions, as shown in (33b).

(33) a. Ŝica-ma-mna.
bad-1s-smell
'I stink.'

b. Siha ŝica-ma-mna
foot bad-1s-smell
'My feet stink.'

Others cannot, as in (34c).

(34) a. Wa-ni.
1s-live
'I am alive.'

b. Natahu mi-t^{h}awa ni.
brain 1s-belong live
'My brain is alive.'

c. *Natahu wa-ni.
brain 1s-live

Clauses of the type in (33) all have predicates that determine an initially unaccusative stratum: i.e. the initial stratum contains a 2 but no 1. This is shown by the verb agreement in (33a). The agreement is a Set II affix. According to Plunkett and McKeever's rule the final subject heads a 2 arc. Clauses of the type shown in (34) all contain predicates that determine initially unergative strata. Thus their final subjects determine Set I agreement (34a). In unergative clauses there are no initial 2's to host PA. (The reader should refer to section 4.1). (35) shows that possessors cannot ascend out of indirect objects.

(35) a. Ŝunka ni-t^{h}awa pweẑuta wa-k'u.[5]
dog 2s-belong medicine 1s-give
'I fed medicine to your dog.'

b. *Ŝunka pweẑuta c^{h}i-c'u.
dog medicine 2s:1s-give

Example (36) shows that possessors cannot ascend out of benefactive NPs.

(36) a. Ŝunka ni-t^{h}awa woweta wa-kahi.
dog 2s-belong food 1s-bring
'I brought food for/to your dog.'

b. *Ŝunka woweta c^{h}i-ci-kahi.
dog food 2s:1s-ADV-bring

Although the indirect object/benefactive can advance, so that the initial 3 is a direct object, ascension cannot occur. If ascension were to occur here, it would be the possessor of an alienable object, since an indirect object/benefactive is not usually a body part (see section 5.2 and 5.3). PA of the type discussed in 5.3 requires the possessor to advance to 2. This would be the second 3-2 advancement in this clause. I have no data to warrant this double advancement to 2. In summary, the host must be the initial 2 of the clause.

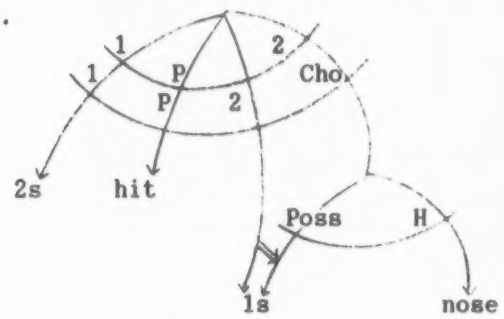
5.2 Possessor ascension with inalienable objects

There are two PA constructions in Dakota. The first occurs with some inalienable objects: specifically body parts. It does not occur with kinship relations. The second occurs with alienable objects. I discuss Possessor Ascension with inalienable objects first. The second type will be discussed in section 5.3.

The PA that occurs with body parts is the simpler case. It allows the possessor of the body parts to ascend directly to the 2 in the matrix clause, cf. (37b). Since the possessor is the final direct object of the matrix clause, it determines agreement on the verb. Equi erasure occurs accounting for the lack of the pronominal prefix in the NP. The body part is finally a chomeur. (27) restated here as (37) illustrates this type of PA:

(37) a. P^hasu a-ma-ya-p^ha.
nose LOC-1s-2s-hit
'You hit my nose.'

b.



Examples (38) and (39) show that the possessed noun must be a body part for this type of PA.

(38) Ŝunka o-c^hi-yut^ha.
dog LOC-2s:1s-touch
*'I touched your dog.'
'Dog, I touched you.'

(39) $T^hankŝi$ gu-ma-ya-ya
sister burn-1s-2s-cause
*'You burned my sister.'
'Sister, you burned me.'

When this construction is formulated with something other than body parts it either means something other than possession, or it is ungrammatical.

5.3 Alienable objects

The second type of PA is the construction that occurs with alienable objects. However, just as in the above examples, kin relations do not sanction this type of Ascension.

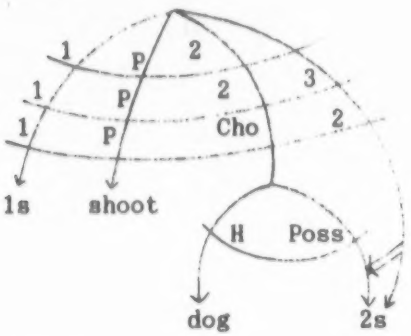
In the second type of Possessor Ascension the possessor of a NP that is initially a 2 ascends to a 3 and then advances to a 2. (41) illustrates this type of PA. In this clause the host is an initial 2. The possessor ascends to 3 and advances to 2 as evidenced by the morpheme ki- that is marked on the verb.

(40) Ŝunka ni-t^hawa wa-kute.
dog 2s-belong 1s-shoot
'I shot your dog.'

(41) a. ŝunka c^{h}i-ci-kute
dog 2s:1s-ADV-shoot
'I shot your dog.'

b. *Ni-ŝunka wa-kute.
2s-dog 1s-shoot

c.



As discussed in section 4.3, the construction in (40) is not a possessive construction but a relative clause. But now consider (41b). Van Valin (1977:45) claims that alienable objects never take the person prefixes as inalienable objects do. In fact, the only types of constructions in which inalienable objects can be used are either PA or relative clauses. This can be accounted for by claiming that PA is obligatory with possessors of alienable objects. The PA facts described here look very much like those described by Judith Aissen for Tzotzil (1987) which does not allow final 3s.

6 Conclusion

There are two types of Possessor Ascension in Dakota Sioux. The first type I discussed follows the Host Limitation Law, cf. (30), and is optional. That is to say, the possessor ascends to bear the grammatical relation of the NP that hosts it. This occurs only when the noun being possessed is a body part. The second type I presented is an ascension of a possessor to 3 followed by advancement to 2. This type is obligatory and occurs only when the noun being possessed is alienable. Neither type of Possessor Ascension occurs with the possessor of kin relations. Finally, possessors only ascend from NPs that are initial 2s.

NOTES

* I would like to express my deepest appreciation to Charles Speck for his encouragement and helpful comments and Bert McBride, who is a Dakota speaker, for his unfailing patience with my tedious questions about the Sioux language. I would also like to thank Sandra McDonald, who is a Dakota speaker and Velma Flying Bye, who is a Lakota speaker. Without their help, this paper would have never appeared. I would also

like to thank Paul Kelly, Jim Maxey and Peter Constable for their helpful feedback. I realize any shortcomings of this paper are my own responsibility.

The following abbreviations are used: 1s -- first person singular, 2s -- second person singular, 3s -- third person singular, pl -- plural, LOC -- locative, POSS - possessive, ADV -- advancement, BEN -- benefactive, ANIM -- animate, INDF -- indefinite, DEF -- definite, RFL -- reflexive, INS -- instrumental.

1. Boas and Deloria (1941), Van Valin (1977), and Williamson (1984) all mention that the verb sometimes agrees with the possessor, but that is as far as they go. They do not discuss other peculiarities in the syntax of such sentences. They do not attempt to account for when the verb agrees with possessors. And they do not attempt to put this phenomena into universal perspective. In this paper I do all three.

2. Dakota Sioux is a language with very productive verbal prefixation. I only introduce prefixation here. For further study of this topic I refer the reader to several other good sources on this topic (cf. Boas and Deloria (1941), Van Valin (1977), and Williamson (1984)). Dakota has several sets of verbal prefixes which modify the verb they attach to. Two of the most common are instrument and location. For example, two instrumental prefixes are: 1) **ba-**, which signifies that the action is done by a sawing motion, as with a knife, Riggs (1968:65), or 2) **ya-**, which signifies that the action is done with the mouth, Riggs (1968:600). Either of these may occur with a set of verbs (i.e. **ksa** to be seperate), changing the meaning of the verb slightly, cf. (I).

(I) a. ba-ksa
INS-separate
'to cut off'

b. ya-ksa
INS-separate
'to bite off'

Since this topic is out of the scope of this paper, I will use the abbreviations INS and LOC for all the prefixes in the sets of instrumentals and locatives, respectively, rather than specifying the precise meaning of the prefix.

3. Williamson (1979:359) says that ic$^{?}$i- occurs when the subject is coreferential with the object (2's or 3's). In my analysis, ic$^{?}$i- occurs when the subject is coreferential with 3 or Ben, but only when they have advanced to 2.

4. The **k** of **ki-** palatalizes following a front vowel.

5. The verb k'u, 'to give', unlike other verbs, doesn't take the advancement morpheme ki-. But it could be claimed that 3-2 advancement still occurs. The argument for this is based on verb agreement. When advancement occurs the verb agrees with the initial 3, consider the following, (II).

(II) Can he c^{h}i-c'u.
stick DEM 2s:1s-give
'I gave you the stick.'

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